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Seven Common Security Mistakes

SECURITY: Despite highly publicized data leaks, many companies still make errors that introduce unnecessary risks. Find out what to watch out for. [© CWNet Inc. 05/2005](#)

From Tapes to Bits: Digital Asset Management

STORAGE: Public television station WGBH got a new architecture for its digital-asset management system by agreeing to trade-offs and concessions with Sun Microsystems and other vendors. [© CWNet Inc. 05/2004](#)

One Way to Boost Wireless Speeds

MOBILE/WIRELESS: With WiMAX and WiBro standards on the way, Intel explains how "smart antenna" technology works and discusses the role it could play in improving network performance. [© CWNet Inc. 05/2005](#)

Pursuing IT-Business Alignment

WEBCAST: Paul Higley, vice president of IT and program development at Owens & Minor, discusses IT's role in helping a company fulfill its current business vision and future business strategy. [© CWNet Inc. 05/2005](#)

IT Blogwatch

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AT DEADLINE

Microsoft, IBM Settle Antitrust Suit

Microsoft Corp. will pay IBM \$775 million and give it another \$75 million in credit under an antitrust settlement reached by the two companies. The settlement resolves claims arising from the U.S. government's antitrust case against Microsoft, which found that IBM was hurt by Microsoft's anticompetitive practices.

The settlement also resolves most other IBM antitrust claims, including those related to OS/2 and the company's SmartGuide products. IBM's claims of harm to its server hardware and server software businesses are not covered by the settlement. IBM did agree not to make claims for server damages for two years and said that it won't try to recover damages on server claims made before June 30, 2002.

Prosecutors Revise Kumar Indictment

Prosecutors have filed a superseding indictment that includes more details about former CEO Sanjay Kumar's alleged participation in the "20-day month" accounting fraud of Computer Associates International Inc. A member of former CA officials, including the ousted chief financial officer and general counsel, have pleaded guilty to charges related to the fraud, which the company has admitted. The revised indictment offers additional evidence against Kumar.

Sun Agrees to Buy SeeBeyond

Sun Microsystems Inc. has agreed to buy SeeBeyond Technology Corp., for \$300 million in cash as it efforts to boost its business integration software business. Sun also disclosed that it is likely to buy additional integration software vendors. Sun and SeeBeyond claimed that there is little overlap between their respective product lines. The purchase is expected to close this fall.

Information Sharing Key to U.S. Security

Top gov't officials say IT can drive improvements

BY GRANT OHORRIS
NEW YORK/LAUREN

THE U.S. GOVERNMENT is getting better at sharing information among the various agencies that are responsible for protecting the nation against terrorism, but IT can help drive more improvements, top-ranking antiterrorism officials said last week.

Two federal officials told a crowd of about 450 that mostly included federal, state and local workers who deal with domestic security issues that the government has improved its information-sharing capabilities since the Sept. 11, 2001, terrorist attacks.

"We're not there yet. We're getting there," said Donna Bucella, director of the FBI's Terrorist Screening Center.

Bucella and Daniel Ostergaard, executive director of the Homeland Security Advisory Council in the Department of

Homeland Security (DHS), both touched on IT during speeches at the fourth annual Government Symposium on Information Sharing and Homeland Security here.

Better sharing of information among government agencies is key to preventing future terrorist attacks on the U.S., Ostergaard said. "Either stop it before it happens, or you're cleaning it up afterward," he said. "I'm focused on stopping it before it happens."

Critical Protections

Ostergaard cited Internet-based control systems for water treatment plants as an example of how IT systems can be used to better protect the so-called critical infrastructure systems in the U.S. While workers in many water treatment plants can check the status of on/off valves with Web-based programs, more pieces of the critical infrastructure need systems that can pinpoint problems and quickly find work-arounds, he said.

The government has determined that the nation's critical

"We need a system that's self-aware, resilient, self-restorative and protects the critical infrastructure."

DANIEL OSTERGAARD,
EXECUTIVE DIRECTOR, HOMELAND
SECURITY ADVISORY COUNCIL

infrastructure has 17 components, including the electrical grid, the food supply chain and the water supply. Ostergaard advocated more use of automated systems to protect them.

"We need a system that's self-aware, resilient, self-restorative and protects the critical infrastructure," he said. "If something does happen, it has to be self-restorative."

Bucella expressed concern about the nearly \$29 million IT budget for the Terrorist Screening Center. "I didn't realize, and I don't think anybody realized when we got into this, how much the IT development costs," she said.

In addition to some aging

critical infrastructure, the DHS faces a number of other challenges in sharing information, Ostergaard said.

As government agencies try to stay away from tightly guarding information, it's now possible that they will share too much information and flood local police and other public safety workers with too much data, Ostergaard said.

The Terrorist Screening Center maintains an up-to-date terrorist watch list and provides those lists to law enforcement agencies, border guards and transportation security agents. Since 2001, the center has had to pull together 12 different government databases, many of which listed common criminals as well as terrorist suspects, into a comprehensive watch list that can provide police officers with real-time data about a subject, such as someone pulled over in a traffic stop.

The center is looking at commercial, off-the-shelf software to meet many of its IT needs and is working on developing software to share with other agencies. Bucella said, "Wouldn't it be great if we could all use the same system?" she said. "That's really it: connectivity." **© 6887**

Gross is a reporter for the EDG News Service.

FBI Rolling Out Data Exchange Network

BY GRANT OHORRIS

The FBI plans to roll out a national information-sharing network in the Seattle area on Aug. 12 to expand such network the bureau will put in place this year.

The Seattle rollout of the Regional Data Exchange, or R-DEX, follows the implementation of a similar network in the St. Louis area in February, and R. Scott Ostergaard, master chief of the FBI's intelligence division, told the Seattle press conference that it is likely to be the last of the 100 offices nationwide to have the system.

Ostergaard detailed the R-DEX project and a related national network called the FBI-DOJ's Network of the Month, which the Justice Department's Office of Intelligence and Law Enforcement Operations in Washington, D.C., and the FBI's Seattle office are currently operating.

state and local partners. R-DEXs allow federal, state and local law enforcement agencies to tie their investigation databases together, providing the same information to all law enforcement offices with access to the database, Ostergaard said.

In the St. Louis area, the FBI, the Missouri State Police, the Missouri State Highway Patrol, the St. Louis Metropolitan Police, the St. Louis County Police and the St. Clair County Sheriff's Department can share information, the FBI said. The R-DEX and N-DOJ are slated to be operational on August 2002, Ostergaard said, calling for broad-based participation for the network to implement and for federal, state and local agencies

partner databases for investigation information. For example, a federal agent who suspects that an attack on a chemical plant is possible could search several databases to find past records that may be relevant to the plant, Ostergaard said.

R-DEX involves a Web-based interface that lets law enforcement agencies in and around a "Single-Point" office share, he said.

Using commercial software will allow the FBI to better replace its current system, which uses competing products that may offer better features, and help improve government IT, Ostergaard said. The FBI's network for the Network of the Month, Ostergaard said, includes the Drug Enforcement Administration, the U.S. Patent and Trademark Office and the Federal Bureau of Prisons.

© 6887

IBM Adds Autonomic Tools To Speed Up Error Detection

Automating analysis of system logs reduces IT troubleshooting, users say

BY PATRICK THIBOUEAU

IBM last week released autonomic computing technology that's designed to automate the process of searching through error logs to determine why a system has failed.

Two users who are testing the multivendor offering said the promised ability to quickly analyze multiple systems and identify failure points is no small thing. Done manually, that work is laborious and eats up IT staff time, they said.

Steve Pelzman, CIO at the Museum of Modern Art in New York, described the autonomic tools as a "retrofit" to his existing IBM-based Web commerce systems framework. "It's doing a mundane

task intelligently — it's like a robot that uses a vacuum cleaner," Pelzman said.

IBM embraced the concept of autonomic computing in 2001 with the goal of creating systems that can manage themselves, take corrective actions and even respond to security threats. Other vendors are also pursuing the technology, but it's still nascent.

Development imperative

Peter Stone, a professor of computer science at the University of Texas at Austin, was one of the speakers at the second International Conference on Autonomic Computing last month in Seattle. Stone said last week that autonomic com-

puting will develop gradually and that initial efforts will be along the lines of the add-on capabilities that IBM is building for existing systems.

But creating systems that can configure, manage, diagnose and heal themselves "just has to happen," Stone said. "As systems are becoming more complex, the amount of time and money spent on system administration is just going through the roof. That can't continue."

IBM's error-log analyzer, which is being offered through its services unit, supports the Web Services Distributed Management standard, which was recently ratified by the Organization for the Advancement of Structured Information Standards. IBM has been driving the development of WS-DIM along with Hewlett-

MORE FROM IBM

As part of its autonomic computing initiative, IBM also introduced a service for managing and improving application server and resource sharing between SAP applications.

It integrated an online maintenance interface and the ability to automatically move data between and within software that enables self-healing of larger applications.

Packard Co. and Computer Associates International Inc. (see related story below).

Dave Bartlett, vice president of autonomic computing at IBM, said the company has built adapters that can parse log files into the WS-DIM format for a variety of servers, storage devices and other equipment from top vendors.

Thomson SA's Camarillo, Calif.-based Technicolor division is testing IBM's Accelerator for Service Management for Problem Determination

technology on its digital asset management system. When system errors occur, the messages that get generated are often ambiguous, said Carrie Capaldi, who manages the Technicolor system.

The autonomic tool ties all the logs together, which lets Capaldi see the relationships between system technologies and pinpoint where problems occurred. Using the tool has increased system troubleshooting speeds by 20% to 40%, he said.

Capaldi said the next phase in the months ahead is for IBM to try to couple the log analysis features with self-healing capabilities that, for instance, could automatically restart a server in a way that works in concert with storage devices and other equipment. That would, for example, enable overnight processing jobs that are stopped by a system failure to resume running automatically instead of waiting for manual repairs that might not be done until the morning, he noted. © 55355

Vendors Team Up on Systems Management Road Map

HP, IBM, CA see simplified process built around Web services, new tools

BY MATT HAMPLIN

At a grid computing conference in Chicago last week, Hewlett-Packard Co., IBM and Computer Associates International Inc. presented a jointly written road map for delivering IT resource management features based on Web services.

The road map outlines the progress made on various standards dating back to 1999, and it describes emerging Web services specifications that are expected to lead to the development of new management tools over the next three years, said William Vambenepe, a management software technologist at HP.

Vambenepe was one of five authors of the 21-page report,

which is dated June 2 but made its first public appearance last week. The document details a common technology approach that's designed to simplify the process of managing existing systems and IT installations based on service-oriented architectures (SOA).

IT tasks that will have to be taken into account as part of advanced systems management scenarios include provisioning, policy-based management, unified resource discovery, resource virtualization and utility computing, according to the road map.

WS-DIM Evolving

CA, IBM and HP also are driving the development of Web Services Distributed Management, one of the new standards mentioned in the road map. Software based on WS-DIM was run on a BlackBerry handheld as part of a demonstration at last week's

event, Global Grid Forum 4. Microsoft Corp. is building a similar specification with help from other vendors. "Technically, Microsoft is not very far from where we're going," Vambenepe said. "We don't expect one model. There are lots of models."

WS-DIM, which in March was approved by the Organization for the Advancement of Structured Information Standards in Billerica, Mass., defines a basic set of manageability features for tasks such as identifying IT resources and the relationships between pieces of equipment.

In a statement, Microsoft said the Web Services Management specification it's co-authoring with Dell Inc., Intel Corp. and other vendors is being designed to work on small, resource-constrained devices in addition to larger systems.

But last week's BlackBerry demonstration proved that WS-DIM code can work on a small device, according to Vambenepe. "WS-DIM has no problems scaling down," he said, adding that the BlackBerry demo code was created by IBM. HP has written its own code for its iPAQ handhelds.

Jason Bloomberg, an analyst

at ZapThink LLC in Waltham, Mass., said the road map helps demonstrate that progress is being made on technology for Web services and SOA. "In general, all the vendors realize they have to play along with interoperability," Bloomberg said. "Politics still could get in the way. But customers get upset with vendors that don't interoperate."

He added that although management tools supporting some of the upcoming standards should emerge within three years, they "will definitely be early-adopter products." © 55348

BRIEFS

Cisco Buys Security Software Maker

Cisco Systems Inc. has agreed to pay \$30 million for start-up Netsoft Inc., a maker of deep packet processing technology that's designed to detect network attacks as they happen. Founded in June 2004, Netsoft employs 15 people. Cisco will fold Netsoft into its Internet systems business unit.

CA to Add Acquired Firewall to eTrust

Computer Associates International Inc. said it has acquired Thy Software Inc. and will add Thy's firewall software to its eTrust security portfolio. Thy's staff of fewer than 20 people has joined CA. The company plans to use Thy's firewall technology in its integrated Threat Management platform, which is due to be unveiled later this year. Financial terms of the deal weren't disclosed.

Oracle Q4 Revenue Grows by 26%

Oracle Corp. reported a big jump in revenue for its fourth quarter, that was driven by its merger with Peoplesoft and strong sales in all product categories. Oracle would not break out specific results from the Peoplesoft business.

ORACLE BY THE NUMBERS

	2004	2005
Revenue	\$13.4B	\$17.1B
Net Income	\$1.1B	\$1.9B

Hacker Breaches UConn Server

The University of Connecticut said a server with personal data on 72,000 students, faculty and staff was breached last month. The server contained personnel information, including names, Social Security numbers and campus addresses. The breach was discovered after UConn's IT department was notified by a non-named corporation that an illegal log-on attempt had originated from a UConn computer.

Tech Alone Can't Stop Security Breaches, Says ChoicePoint CSO

Responding to criticism in wake of Feb. 16 incident, Baich says issue transcends IT

BY JAHUMLAN VILAYAN

A massive data compromise at ChoicePoint Inc. earlier this year has made the Alpharetta, Ga.-based data aggregator a target for those calling for tougher data-protection laws. (QuickLink 5/27/05) In an interview with Computerworld, Rick Baich, ChoicePoint's chief information security officer, talked about the breach, the measures that have been put in place since then and the salient lessons for other CISOs.

You have in the past said that what happened at ChoicePoint was not really a security breach. Then what was it? It all comes down to how you define a breach and how you define an incident. This was fraud. Someone fraudulently provided authentication to the system. It's not different than credit card theft and credit card fraud. Those are never referenced as IT-related issues, though they happen millions of times every year. People are trying to point to a person, when we really need to be looking at things as an industry.

But wouldn't IT controls have helped? Sure. As an industry, I think we have gotten better with our fraud analytics tools. There's technology that can do geographic IP location. There is some technology that can help mitigate the risk — not stop it.

So are you doing anything differently now? Yes. We are looking at our easier credentialing process, the entire business process and how it's being done. We are looking at putting additional technolo-

gies in place and [at] the way we do business with others.

What's the take-away from that whole incident? What's your advice for CIOs? If you are going to have this role at a time when there is really no firm guidance, make sure you have selected a model to implement. If you have selected a model and you are implementing a program around that model, you can be successful.

Why are we hearing about so many major data compromises these days? What's happening? In general, more organizations are reporting it. But I also think the processes and the technologies have matured so

that they are now realizing it. You have to remember, an incident is an incident only if it's reported. So, as frightening as it is, there is also a positive end to it because at least the people are catching it.

Will the concern generated by the recent spate of data compromises inevitably result in more mandatory controls? When people want to put controls in place, it may be difficult, because what controls do you put for what kind of information? The incidents have caused a new focus within many organizations, and I think in the long run, that itself will help mitigate future risk.

Are companies looking at compliance requirements more as a baseline set of controls they have to meet from a security standpoint, or as the ceiling? I think every company is always

evolving to be stronger in their own maturity model when it comes to security. We have tried to stay ahead of the curve. But the toughest part about legislation right now is you don't know where it's coming from and you don't know what to expect.

You just released a book on what it takes to win as a CISO. So, what does it take to be successful? Winning is about getting a seat at the boardroom table and becoming a true member of the senior executive team. It's when you are able to intertwine security into every business aspect. It's about leaning more toward risk rather than talking about security. © 2005

READ MORE ONLINE

Visit our Web site to read an extended version of our interview with Baich: [QuickLink 5/27/05](http://QuickLink.5/27/05) www.computerworld.com

New Credit Card Security Rule Takes Effect

Some merchants are concerned about compliance

BY JAHUMLAN VILAYAN

A data security standard for all merchants handling credit card data went into effect last week amid concerns over potential implementation and compliance validation issues.

Analysts said many of the banks and merchants that must adhere to the Payment Card Industry (PCI) standard, backed by MasterCard International Inc. and Visa U.S.A. Inc., lack the resources and capabilities to meet its provisions.

In addition, many merchants remain unsure of what they must do to meet the standard, which was created jointly by several credit card associations. And many of the so-called acquiring banks,

which decide whether specific merchants are eligible to accept credit cards, often lack the expertise to ensure merchant compliance with PCI, analysts said.

Merge of Programs

The standard unifies two previously separate sets of requirements: Visa's Cardholder Information Security Program and MasterCard's Site Data Protection Program.

Under PCI, all companies that accept credit cards must comply with 12 security-related requirements that call for, among other things, encrypted transmission of cardholder data, periodic network scans, logical and physical access controls, and activity monitoring and logging.

The acquiring banks face fines of up to \$500,000 per incident if credit card data is

found to be compromised. While analysts agree that the PCI standard incorporates some sound security practices, the credit card industry must quickly address its problems. For example, for most merchants, compliance is based on self-assessments rather than on third-party audits, said Irv Resnick, an analyst at Cambridge, Mass.-based Forrester Research Inc.

Only the largest merchants — those processing more than 6 million MasterCard or Visa transactions annually — must submit to costly PCI compliance audits, Resnick said.

"Security is not something that can be assessed in 20 to 30 minutes with a self-assessment questionnaire. It would be very difficult to determine whether a merchant is telling the truth" without more controls, he said.



Q&A

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Salesforce.com CRM Rollout at Cisco Said to Slow

Research firm:
Project is 9 months
behind schedule

BY MARC L. SOROKIN

What once looked to be a major deployment of hosted CRM software at Cisco Systems Inc. is now the subject of a damning report from an equities research firm that says the project has stalled.

In a note published on June 22, analysts from JMP Securities LLC said that a deployment of hosted CRM software from San Francisco-based Salesforce.com Inc. had been delayed.

Salesforce.com signed a deal with Cisco during the second half of 2004 that called for an initial rollout of up to 2,000 seats and a later installation of as many as 10,000 seats by this June, according to San Francisco-based JMP.

End-user resistance and integration challenges forced the deal to be renegotiated so that the rollout is staggered.

An even bigger issue is that most acquiring banks lack the expertise to monitor compliance with PCI, said Aviatal Litan, an analyst at Gartner Inc. in Stamford, Conn.

"There are some really good security principles in PCI," she said. "The problem is that acquiring banks are in way over their heads when it comes to implementation."

Credit card associations like MasterCard and Visa have also been vague on several aspects of the standard, Litan said. For instance, there are no clear directives on how and when penalties will be assessed, she said.

"There are so many questions that our clients want answered, but there's no one to answer them," Litan said. "You just can't plunk down a security standard and simply walk away."

MasterCard and Visa did not respond to requests for comment. © 85389

Completion is now set for March 2006, the report said.

Salesforce.com confirmed that Cisco is a customer but declined to comment on the size or status of the implementation. Cisco also declined to comment, citing a policy of not talking about vendor relationships.

Some analysts said the report calls into question Salesforce.com's ability to handle large implementations. So far, according to JMP, only 1,000 seats are running the software, and Cisco is due to review the deployment.

The JMP analysts said "due diligence" in their research found that Cisco users have been slow to embrace the system because it doesn't support tools that handle tasks such as territory management, advanced account hierarchies and forecasting.

Cisco IT staffers are struggling to link the Salesforce.-

com software with those tools and are questioning the wisdom of relying on a heavily customized a hosted application, the report said.

Cisco is also coping with unexpected change management and training issues, forcing the company to throw more resources at the project. "Last," said the note, "we believe that [Cisco] will support for the Salesforce.com service may be wanting due to some changes in the business operations leadership as well as a sense among the sales leadership that it's not worth rocking the sales operations for a new vendor."

Salesforce.com declined to comment on any details of the report, but it issued a statement that said, "Salesforce.com has consistently been ranked at the top of the class as it relates to customer satisfaction, and we'll continue to

work hard with Cisco and all of our other customers to ensure that remains the case."

Rebecca Weitemann, an analyst at Nucleus Research Inc. in Wellesley, Mass., raised questions about the hosted software's ability to support deployments of more than 2,000 seats. "There's nothing wrong with the platform, but

Salesforce.com Problems at Cisco

it's not proven that it's a CRM solution that scales," she said.

In a report last month based on a survey of 29 Salesforce.com customers, Weitemann indicated that the larger companies using the software typically do so on a divisional level with deployments that don't exceed 1,000 seats.

Salesforce.com, however, claims that it has had a number of successful large deployments at major companies, such as the one at Corporate Express Inc., a Broomfield, Colo.-based provider of office and computer products and services.

"We have had no issues with scalability in our environment, as evidenced by the rapid rollout of our first 2,500 users over the last year," said Mark Newhall, vice president for customer care and quality systems at Corporate Express, in an e-mail message.

Corporate Express uses a customized version of Salesforce.com to support sales and collaboration efforts. © 85346

U.K. Tax Agency Mulls Lawsuit Against EDS

BY MARC L. SOROKIN

A U.K. government agency has threatened Electronic Data Systems Corp. with legal action to recoup some of the monies lost as a result of a troubled tax credit management software system.

Her Majesty's Revenue & Customs (HMRC) department is threatening a lawsuit to recoup part of an estimated \$3.5 billion in overpayments that were caused in part by technical glitches in a credit system designed and implemented by EDS under a contract with the agency.

The system was built to guarantee that accurate credits were awarded to families who have children or were below certain income levels.

HMRC declined to disclose EDS's specific role in building or supporting the system, or the amount it would seek to recover, citing the pending litigation.

By far, most of the overpayments were the result of procedural errors, according to the agency. The remaining overpayments, which the agency is seeking to recover from EDS, were the result of processing and technical glitches. The amount of those particular overpayments wasn't disclosed.

Overall, the agency has said that so far about \$90 million has been deemed recoverable.

Plans to Team-based EDS implemented the system, but

after its support contract expired in June 2004, EDS rival Capgemini was hired by HMRC to take over.

"HMRC now has a new IT partner, the system is working well, and discussions are ongoing with EDS about compensation for past failures," the agency said in a statement. "Court proceedings will begin if and when those discussions do not satisfactorily resolve the dispute."

Performance Problems

Citing potential litigation, HMRC representatives declined to go into the specifics of the system or the technical problems involved.

A July 2003 House of Commons Treasury Committee report, however, said the EDS-built credit processing system suffered performance problems as it took feeds from other systems. In addition, the committee report said that the IT staff found response times to be inordinately slow, which caused the system to be brought down several times a day.

A U.K.-based EDS spokes-

man declined to comment on any specifics of the situation. "These discussions continue, and we're putting our best resources on them with the aim of making sure we get to the point where there is an agreement that's mutually acceptable around the tax credits issue," he said.

EDS's reputation could be harmed if the agency proceeds with the lawsuit, said John O'Brien, an analyst at London-based research firm Ovum Ltd. In a note published on June 21, he said EDS has been rebuilding its reputation in the U.K. public sector since losing the tax agency's contract to Capgemini last year.

The company got a big boost in rehabilitating its image when it won a \$7.2 billion IT services revamp contract with the U.K. Ministry of Defense last March (QuickLink 82897).

However, O'Brien noted that "this ghost of EDS's past just won't go away" and that the company must be careful about how it handles the situation. © 85390

"Court proceedings will begin if and when those discussions [with EDS] do not satisfactorily resolve the dispute."

HMRC STATEMENT

BRIEFS

SAP Extends Oracle Migration Plan

In a move to attract more customers from Oracle Corp., SAP AG is extending its Safe Passage migration program to include several and more Oracle products and modules. SAP and its migration partners will provide companies running PeopleSoft and JD Edwards software a migration path to nearly 800 mySAP All-in-One applications.

Corel Names Former IBM Executive CEO

Corel Corp. has named former IBM executive David DeBosse its CEO. He replaces Aviath Mehta, who takes over as chairman. Mehta became interim CEO in April 2003, when Corel was acquired by Volaris Capital Corp. DeBosse held senior posts in his 20 years at IBM, most recently corporate vice president in charge of strategy.

Judge Lets SCO Lawsuit Proceed

The SCO Group Inc.'s漫长的 lawsuit against Novell Inc. is now set to enter the discovery phase after the judge in the bitter battle denied a second Novell motion to dismiss the case. SCO filed the suit in January 2004, arguing that it owns the rights to the Unix and Unde-Unix copyrights. SCO is seeking damages from what it says are Novell's false claims about owning the Unix source code.

Accenture Wins Army Contract

The U.S. Army has awarded Accenture Ltd. a 10-year, \$557 million contract to build and support new financial systems that will allow the Army to better track its income and spending. The Army's Program Executive Office for Enterprise Information Systems said Accenture was selected over four unnamed vendors to build the service's new General Fund Enter-prise Business System.

C ON THE MARK

HOT TECHNOLOGY TRENDS, NEW PRODUCT NEWS AND INDUSTRY BUZZ BY MARK HALL

**Harried IT Execs Are Being Hounded by . . .**

... politicians who desperately want to pick their brains. "After doctors, IT guys are the most surveyed guys in the country," observes Jeff Henning, chief operating officer at Perseus Development Corp. in Braintree, Mass. Your popularity among researchers often

makes you reluctant to answer their endless queries, he says. The longtime market research expert claims that it's even worse in England, where he recalls having to brief IT managers "with 40-year-old bottles of scotch" to get them to complete research studies. While dusty jugs of pricey booze may get your attention, handing them out isn't cost-effective for the researchers. Still, question you they must, argues Henning, "because [businesses] don't have the deep relationships with individual customers that [they] once did." To help companies survey customers about satisfaction levels or future needs without abusing their precious time, Perseus sells Web-based software that centrally man-

ages the entire research process. The company's SurveySolutions/EFM 1.4 upgrade ships next week with improved trend-data reporting, added question libraries and a host of other updated features. Pricing starts at \$40,000.

Dump road warriors' docking stations . . .
... and replace them with USB port replicators. Matthew Chang, marketing manager at Addilox Inc. in Irvine, Calif., boasts that his company's UniXpress device needs only a single USB connection to a laptop PC to handle signals from your monitor, keyboard, mouse, LAN, printer, speakers and more. And you can attach a second monitor to the \$179 unit and use it with your laptop's screen to create a single display. Chang says Addilox is working on a scaled IP-KVM technology that lets you use a PC across the Internet as if it were local. That should be ready in September, he says.

Free is good, especially if . . .

... it's for something useful. And Rosis Haasler, vice president of marketing at Nsight Inc. in Pleasanton, Calif., believes I'll think her company's offer of free access for 100 users to its Nsight Starter Edition is very practical, indeed. The online service gives you tools to manage IT service requests, workers' time off, employee status changes, travel authorization and staff performance reviews. Haasler contends that once you are hooked on the Starter Edition, you'll be back for more, including Nsight's flagship CRM tools, which cost \$30 per user on a monthly basis.

This fall, she says, the company will add self-service tools for creating business process automation applications using Nsight's predictive routing engine. The idea is to help enterprise-wide enterprise activities, using business rules defined by your business analysts. The best news is that users of the service won't have to bother IT, Haasler claims. "There's no coding," she says. "It's all drag-and-drop."

Sharpen security on the edge of . . .

... the corporate network by "segmenting" all corporate data on mobile devices. That's the theory behind Trust Enterprise Secure (TES) 5.0, which is due to ship late this month from McLean, Va.-based Trust Digital Inc. CEO Nick Magliato says the software encrypts your applications and their data "into a corporate capsule" on a mobile device. He notes that knowledge workers come to work armed

with handhelds, thumb drives, iPods and all manner of gadgets, some of which actually help them do their jobs but all of which can carry sensitive company info. TES can secure the data, identify devices that are trying to access your network and give you the power to refuse them access. For example, Magliato claims that the software will let you set a policy dictating that only Palm handhelds are acceptable or that no USB devices can connect to a given LAN segment. The TES server software costs \$20,000 and client licenses start at \$100 per employee.

Computer porn problem persists . . .

... inside the Fortune 500. According to a survey conducted in May by Atlanta-based Dehr Consulting, half of the 50 executives who were polled said their companies have had incidents in which employees were disciplined for maintaining pornographic images on their computers [QuickLink a630]. That's why Jack Sunderland argues that IT needs to protect its employees from the rude code and possibly illegal images circulating in the workplace. Naturally, the CEO of Content-Watch Inc. in Salt Lake City wants you to choose ContentProtect 2.0 when it ships this month. The \$40-per-seat client software prevents prurient end users from reaching places deemed to be porn sites by ContentProtect. Sunderland claims the upgrade is 400% faster than the current Version 1.0 and includes improved mass-deployment tools. © 2003

70%

(hp)



2
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GLOBAL

Microsoft Taps Japan For Software Research

TOKYO

MICROSOFT CORP. is teaming with six elite Japanese universities in a bid to expand its software research. Bill Gates, the company's chairman and chief software architect, said at a news conference here last week.

The Microsoft Institute for Japanese Academic Research Collaboration, which opened July 1, will develop natural-language and speech recognition software as well as advanced user interfaces.

"Software today is very simple compared to what it will become in the future," Gates said. Voice recognition, visual recognition and artificial intelligence systems "are still just a dream," he noted, adding that companies such as Xerox Corp. have failed to turn their research investments into commercial products.

"We want to change that and keep a strong relationship between

products and research," he said.

Microsoft will give the institute's researchers its latest software and set up fellowships and scholarships to promote the research. Gates said. He declined to say how much Microsoft is investing in the venture.

■ PAUL KALLENDER, IDG NEWS SERVICE

Trial of Sasser Suspect Begins This Week

DUISBURG, GERMANY

THE TRIAL of 19-year-old Sven Jaschan, accused of creating and releasing the Sasser worm responsible for crashing hundreds of thousands of computers worldwide in May 2004, begins this week in Verden, Germany.

The student from Wassenberg, Germany, was arrested in May of last year and indicted in September. Jaschan has been charged with computer sabotage, data manipulation and disruption of public systems. In Germany, computer sabotage carries a maximum sentence of five years in prison.

PHOTO COURTESY OF AP/WIDEWORLD

■ JOHN RIBERO, IDG NEWS SERVICE

of five years in prison.

The Sasser worm, which spread quickly via the Internet, exploited a hole in Windows [QuickLink 49218]. In the U.S., for example, Sasser hit unpatched desktop systems at American Express Co. and Boston College [QuickLink 46662].

German prosecutors have chosen as plaintiffs three of the country's city governments and a broadcaster whose systems were disrupted by Sasser.

■ JOHN BLAU, IDG NEWS SERVICE

India Distributes Free Software to Citizenry

BANGALORE, INDIA

THE GOVERNMENT of India plans to provide CDs of free desktop software in 22 local languages to all of its citizens in hopes of broadening computer use in the country, especially in rural areas.

India's Centre for Development of Advanced Computing, a Pune-based government organization, is already distributing CDs with open-source software in Tamil and Hindi, and it plans to release a Punjabi-language version this summer, staff scientist R.K.V.S. Raman said last week. The CD includes a Web browser, an e-mail client and word processing software. ■ 55302

■ JOHN RIBERO, IDG NEWS SERVICE

■ Compiled by Mitch Betti

Alleged Data Theft in India Puts Spotlight on Security

BY JAHUAR VILAYAN

Recent data compromises involving outsourcing vendors in India are focusing renewed attention on offshore security and privacy safeguards. But so far, at least, they haven't resulted in any calls for additional controls from U.S. clients, according to executives at several Indian firms.

The most recent incident involved the alleged sale of information about more than 1,000 U.K. bank accounts to a British newspaper. The data was obtained by an individual in New Delhi from call center contacts and sold to a reporter from *The Sun*, according to a story that the London-based tabloid published on June 23. That was the second such

security breach involving India's call center and business process outsourcing industry to be reported in recent months. In April, 12 people, including three former call center employees of Mumbai-based Mphasis BPL Group, were arrested in India for allegedly defrauding four Citibank account holders in New York of more than \$300,000 [QuickLink 53634].

"These things are scary," said the vice president of technology planning and development at a large investment management firm in the U.S. The IT manager, who requested anonymity, said his company has outsourced several application development and maintenance projects to a firm

in India and already has several security controls in place.

For instance, the offshore team that is doing the development work has no access to production data and instead works with test and quality-control information. All access to nonpublic data, such as Social Security numbers and account details, is monitored, recorded and audited.

The company also plans to roll out an event notification and management tool that is designed to give U.S. IT staffers even greater visibility into what's going on at the facilities in India, the IT manager said.

Those measures are being reviewed as a result of the alleged security breaches, but there's no immediate plan to

add more controls, he said.

"A very public security breach like this has naturally created some concern. But it has not created any backlash among customers," said Marc Hebert, executive vice president of Fremont, Calif.-based

Silicon Valley Inc., which has an IT services facility in Hyderabad, India.

Much of that may stem from the fact that U.S. companies have been requiring greater security controls on the part of vendors in India for some time now, said Sunethra Mather, senior vice president of financial services at Mumbai-based Patni Computer Systems Ltd.

Mather noted that several of Patni's customers in the financial services sector have a laundry list of security re-

quirements that includes biometric access controls, camera surveillance of operations staff, two-factor user authentication, data encryption, database monitoring and employee background checks.

"You can't get past the first meeting without showing what kind of security measures you have," Mather said. Even so, more incidents could have an impact on the level of the IT work that is entrusted to Indian vendors, he added.

In an apparent bid to stave off such concerns, the Delhi-based National Association of Software and Service Companies issued a statement saying that it's working with the Indian government to toughen data protection laws. Nascom also is creating a centralized information repository for conducting background checks on job applicants [QuickLink 53817]. ■ 55048

Briefly Noted

The N.Y. Office for National Statistics has developed data visualization software from Corde Technologies Inc. In its new Relationship-based Visualization Web site, the London, U.K.-based company automated last week, Corde's PopChart software lets visitors use interactive charts and graphs to view government data at the local level.

Yamato Bank Ltd., a regional bank based in Tokyo, has selected predictive analytics software from SPSS Inc. to improve its lending credit operations. Chicago-based SPSS sold last week that the bank plans to develop a credit scoring system for lending loans.

Compania Vale do Rio Doce (CVRD), the largest mining company in South America, has awarded Gaudens International Ltd. a five-year contract for e-government services. The Pleasanton, Texas-based vendor sold last week, CVRD, based in Ilheo do Jucá, expects to dramatically increase 90% of the materials and services it uses by the end of next year.

Inaction on Offshoring Will Hurt U.S. IT, Author Says

Hira claims that job shifts threaten ability to innovate

BY PATRICK THIBODEAU

U.S. political and business leaders are in a state of denial over the impact of offshore outsourcing, brothers Ron and Ant Hira argue in their new book, *Offshoring America* (Amacom, 2005). Ron Hira, an assistant professor of public policy at the Rochester Institute of Technology in New York, said in an interview with Computerworld last week that some actions need to be taken in response to the offshoring

trend. Excerpts from the interview follow.

By offshoring a lot of our IT work, is the U.S. losing its ability to innovate? I personally think that is true in a number of respects. You're creating the next generation of entrepreneurs. If you look at the IT services firms in particular, who are sort of the first movers in all of this, they don't do a lot of research and development, but that doesn't mean they're not innovative. What they're doing is incremental innovation, and a lot of the capabilities are built into the learning the workers actually gain [on projects]. And a lot of these companies are started by people who have worked at other companies. You are going to be losing that

next generation of potential entrepreneurs.

Are you worried that the U.S. is going to lose its ability to stay ahead of the global IT marketplace? I don't think we can sit on our hands. I'm worried by the inaction. We're at a state where essentially nothing has happened. U.S. companies may succeed, but they won't necessarily succeed with U.S. workers, and that concerns me about our future. I do think we need to take some responses here.

What responses can be taken? There are some no-brainer responses. [For ex-

ample,] extending trade adjustment assistance to services workers. Software workers who are displaced by trade — and they are clearly being displaced by trade — are not eligible for trade adjustment assistance. It's extended unemployment insurance, health care benefits and retraining money.

What else should be done? The first step is that we should acknowledge that this causes problems. There are a lot of people out there who say that this really isn't a problem. One of the other things that we could be doing is collecting objective data on this. The McKinsey Global Institute, which benefits from outsourcing and which consults and helps companies figure out how to outsource more, just came

out with another study two weeks ago. I don't think that we should be relying on their data in order to have a public discussion.

Will a combination of business and technical skills be enough to ensure future employment for U.S. IT workers? The labor market here is going to be flat or shrink to some extent in response to [offshoring]. Unless there is a real increase in demand, and I don't see that, I've heard a lot of people talk about the need for a mix of business and IT capabilities — just being a good programmer is not enough. If that were true, we would expect to see MIS programs in business schools booming because there would be so many companies knocking on their doors trying to hire their graduates. The reality is, enrollments are down significantly in those MIS programs, too. The labor market signals aren't there yet that that's where you need to be. © 55328

Continued from page 1 Wachovia

(cost) savings, and we were talking to our peers in the industry that had made productive savings through offshoring and could attest to the quality of the work," said Davis.

The Charlotte-based bank, which shared its outsourcing plans with employees the week of June 20, has taken a course that maps with those of other large banks, such as ABN Amro Bank NV. These businesses are leveraging labor arbitrage and creating operational efficiencies by using a "follow the sun" approach to IT processing, said Bradway.

By outsourcing application support to global services firms with regional capabilities in, say, the Far East and Eastern Europe, Wachovia and other banks "can quite easily compress the time it takes to deliver support requirements," he noted.

Wachovia successfully out-

sourced two development projects to an Indian firm in the late 1990s and made use of an Eastern European firm to help it integrate its brokerage systems with those of Prudential Securities for any system that contains sensitive customer information.

Instead, the systems being targeted by Wachovia support have selected maybe a dozen applications for this first round of review out of hundreds," she said.

Wachovia isn't terribly different from what a lot of Wall Street firms have done, outsourcing less time-critical and

ly reports or overnight processing systems, said Davis.

"For instance, the CEO team that supports the retail bank has selected maybe a dozen applications for this first round of review out of hundreds," she said.

"Wachovia isn't terribly different from what a lot of Wall Street firms have done, outsourcing less time-critical and

customer-sensitive [data processing]," said Robert Iati, an analyst at The Tabb Group in Woburn, Mass.

Davis declined to name the three vendors Wachovia is negotiating with but said one is based in the U.S. and one is in India. She declined to give the location of the third vendor. All three offer global processing support, she said. © 55328



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Hira claims that job shifts threaten ability to innovate

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trend. Excerpts from the interview follow:

By offshoring a lot of our IT work, is the U.S. losing its ability to innovate? I personally think that is true in a number of respects. You're creating the next generation of entrepreneurs overseas. If you look at the IT services firms in particular, who are sort of the first movers in all of this, they don't do a lot of research and development, but that doesn't mean they're not innovative. What they're doing is incremental innovation, and a lot of the capabilities are built into the learning the workers actually gain [on projects]. And a lot of these companies are staffed by people who have worked at other companies. You are going to be losing that

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What else should be done? The first step is that we acknowledge that this causes problems. There are a lot of people out there who say that this really isn't a problem. One of the other things that we could be doing is collecting objective data on this. The McKinsey Global Institute, which benefits from our research and which consults and helps companies figure out how to outsource more, just came

out with another study two weeks ago. I don't think that we should be relying on their data in order to have a public discussion.

Will a combination of business and technical skills be enough to ensure future employment for U.S. IT workers? The labor market here is going to be flat or shrunk to some extent in response to offshoring, unless there is a real increase in demand, and I don't see that. We heard a lot of people talk about the need for a mix of business and IT capabilities — just being a good programmer is not enough. If that were true, we would expect to see MIS programs in business schools booming, because there would be so many companies knocking on their doors trying to hire their graduates. The reality is, enrollments are down significantly in those MIS programs, too. The labor market signals aren't there yet that that's where you need to be. © 55326

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Wachovia successfully out-

sourced two development projects to an Indian firm in the late 1990s and made use of an Eastern European firm to help it integrate its brokerage systems with those of Prudential Securities following the companies' July 2003 merger, said Davis.

Davis declined to name specific applications throughout each of the bank's divisions

that have been targeted for offshoring. However, the did say that Wachovia will not be outsourcing support for core production systems, nor will it be offshoring support for any systems that contain sensitive customer information.

Instead, the systems being targeted by Wachovia support back-office operations, such as applications that generate dai-

ly reports or overnight processing systems, said Davis.

"For instance, the CIO team that supports the retail bank has selected maybe a dozen applications for this first round of review out of hundreds," she said.

"Wachovia isn't terribly different from what a lot of Wall Street firms have done, outsourcing less time-critical and

customer-sensitive [data processing]," said Robert Latte, an analyst at The Tabb Group in Westboro, Mass.

Latte declined to name the three partners Wachovia is negotiating with but said one is based in the U.S. and one is in India. She declined to give the location of the third vendor. All three offer global processing support, she said. © 55336

ABN Amro to Outsource 2,300 IT Jobs

ABN AMRO BANK plans to outsource 2,300 IT jobs later this year in a continuing effort to cut costs, according to executive officer with the bank's plans.

ABN Amro spokesman Mark Heslin confirmed last week that the bank is negotiating several outsourcing contracts but declined to say how many of its 6,500 IT workers will be affected by the moves.

Heslin did say that some of the affected employees will transfer to the outsourcing firms.

The IT workforce has already been cut by 1,200 in recent days, bringing the total head count to 3,500. Indian outfit ABN Amro is employing 1,200 IT workers somewhere after the outsourcing contracts are signed this fall.

The workforce reduction is part of a plan to save more than \$1 billion annually [Outlook: 2006]. ABN Amro envisions 9,700 workers in 3,000 branches around the world. Heslin and ABN Amro are negotiating with several firms for

multiple outsourcing contracts.

The bank had been in discussions with both IBM and PricewaterhouseCoopers, and IBM did outsourcing its IT infrastructure but is now in talks only with IBM.

Heslin said the bank is in negotiations with Accenture Ltd., IBM and Indian outsourcing firms Infoglobe Technologies Ltd., Prolific Computer Systems Ltd. and Tata Consultancy Services Ltd. to outsource its application development operations.

ABN Amro is also in talks with

Infoglobe and Tata about outsourcing its application maintenance operations, he said.

All of the deals should be done around September, Heslin said.

Larry Tabb, an analyst at The Tabb Group, said financial firms are under tremendous cost pressure and need to rethink how they run their organizations.

If all goes right, Tabb said, outsourcing can reduce a company's costs and enable the people left within the organization to focus on the high-priority projects and the things that make a difference to the bottom line.

— Linda Rosenzweig



DON LENNANT

AMD: All My Disgust

IT WAS ONLY a matter of time before Advanced Micro Devices filed an antitrust lawsuit against Intel, alleging that its nemesis for years has engaged in anticompetitive practices that bullied hardware vendors into shunning AMD's processors. As I've mentioned in this space

before, you don't have to look any further than Dell to see what's been going on [QuickLink 54068]. Dare to use AMD processors, and you'll pay dearly by losing those sweet pricing deals.

It's hard to fathom that Intel will fight the allegations with a wholesale denial that it uses strong-arm tactics. When a report released in March by the Japan Fair Trade Commission concluded that Intel contravened Japan's Antimonopoly Act by compelling five major PC vendors to either be all-Intel all the time or cap their use of non-Intel processors at 10%, it forced Intel to show its hand. The company opted not to officially challenge the report's findings. Good call. A lot of this stuff is so blatan-
t that plausible denial isn't even an option.

That's not to say Intel won't put up a fight. It will engage in the kind of legal maneuvering that only obscene amounts of money can buy, so that the case becomes so convoluted that it will languish in legal limbo until the Gateway cows come home. Meanwhile, life will go on, and hardware vendors will continue to be beaten into submission with Intel's pocketbook.

There's a lot that's disgusting about all this, but only about a third of my disgust is directed at Intel. I'm pretty disgusted, though, so that's still a lot. Watching out for the best interests of your employees and shareholders is certainly commendable, but when you do it at the expense of fairness



and respect for your partners and competitors, you deserve all the disdain you get.

Another third of my disgust is directed at the wimpy hardware vendors that allow themselves to be manipulated by Intel. In its 48-page complaint, AMD alleges that in 2001, Gateway CEO Ted Waitt told an AMD executive that his company had been offered "large sums" not to do business with AMD. "I have to find a way back to profitability. If by dropping you, I become profitable, that is what I will do," the complaint claims Waitt said.

Of course we don't know if Waitt really said that, or anything like it. But there's little question that hardware vendor executives have quiv-

ered and buckled to a degree that's downright embarrassing. If they'd had the fortitude to stand up to Intel, the users who have been clamoring for more choice would have been much better served.

The final third of my disgust is reserved for AMD. Its processor technology is every bit as good as Intel's, and arguably better. The only way Intel can be successful in its alleged attempts to bully vendors into sharing AMD chips is for there to be a perception among computer buyers that AMD's products are somehow inferior. And AMD has no one to blame for that perception but itself. You can't have technology that's at least on par with Intel's and yet have such a pathetically small share of the processor market, unless your marketing and execution have been mired in incompetence for years.

It's a shame it had to come this. Every Intel and AMD dollar that goes into a lawyer's wallet is a dollar that could have gone into R&D to make better products. Now that's disgusting. **© 65310**

Don Lennant



BRUCE A. STEWART

Lying Low, And Thinking Big Picture

CIOs ENGAGED in the long march toward the technology-enabled enterprise — a journey that can take more than a decade — try to balance their desire for dependency on technology against the credibility of the IT organization. Paradoxically, though, you can be too credible for your time, and you just might have to lose some credibility to gain your term objectives.

Let's look at a very successful company in the product business. It depends in volume, looking to cut prices per unit to win business — especially in international markets, where competition is fierce — and leverage its ability to ship large quantities of product to lock in large customers that have heavy demands. In this company, IT isn't even about being a basic service provider — the CEO's focus on costs makes every decision come out as "How low can you go?" As a result, in the past year the CIO has dismantled his service desk operation, locked down PCs to minimize the need to intervene, forced further product duplication out of his software mix and postponed a much-needed upgrade for yet another year.

Why is this CIO acting like this? He's got his eye on the bigger picture. Today, the company can compete in this way, and the CIO's mandate is to do the bare minimum. His company was involved in a recent merger that has forced him into consolidation mode, and a merger of two competing firms has crippled his company's direct competitor, which was innovating through technology usage. Basic parity with this industry as it currently exists is all that's required, so his architectural efforts are on hold. Increasingly, the CIO's capabilities in the IT

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Let's look at a very successful company in the wood products business. It depends in volume, looking to cut prices per unit to win business — especially in international markets, where competition is fierce — and leverage its ability to ship large quantities of product to lock in large customers that have heavy demands. In this company, IT isn't even about being a basic service provider — the CEO's focus on costs makes every decision come out as "How low can you go?" As a result, in the past year the CEO has dismantled his service desk operation, locked down PCs to minimize the need to intervene, forced further product duplication out of his software mix and postponed a much-needed upgrade for yet another year.

Why is this CIO acting like this? He's got his eye on the bigger picture. Today, the company can compete in this way, and the CIO's mandate is to do the bare minimum. His company was involved in a recent merger that has forced him into consolidation mode, and a merger of two competing firms has crippled his company's direct competitor, which was innovating through technology usage. Basic parity with his industry as it currently exists is all that's required, so his architectural efforts are on hold. Increasingly, the CIO's capabilities in the IT

organization are going untested.

But his long-term picture is quite different. In a few years, the easy timberlands the company is currently "mining" will be gone and the company will need to be more selective — and a program of mill consolidation and repurposing that's now being developed will have produced its results. The company will start to have more products in the mix than train of stock lumber. Further industry consolidation and the entry of a new player through acquisition will have changed the competitive landscape, and the recently changed leadership at the top of the firm will have had time to bring into focus its vision of the future. The time will be ripe to push forward, restoring previous services and advancing business transformation through reinvestment.

Most of us would look at this CIO and shake our heads. Withdrawing services and hunkering down to do very little for a few years isn't a typical résumé-building move. Yet this CIO has committed to turning this commodity player into a full-fledged trading company that treats each raw tree as a unique asset with a potentially different value path. He can't sell that idea today — after all, a company much like his own has swallowed up the competitor that tried this model. Believing that the long-term legacy is more important than short-term success, he will wait — and match the perception of the IT organization's capabilities to the demands placed upon it. His credibility thus remains high, even as he limits IT's ability to build credibility.

There are times when the most decisive action is to do nothing. **© 55238**

THORNTON A. MAY

In the Minds Of Next-Gen IT Leaders

I RECENTLY ATTEMPTED to identify the skills that next-generation IT leaders think they are going to need in order to be successful when their turn comes to run IT.

I compiled information from four sources: the IT Leadership Academy, which has a database of 1,500 CIOs; the Berkley CIO Institute, whose current class consists of 50 of the top next-generation IT leaders in the

country; the 56 soon-to-be MBAs at Ohio State University's Fisher College of Business; and the 1,200 graduates of UCLA's Managing the Information Resource Program. Thirteen arrows for the career quiver of the future emerged. Tomorrow's IT leaders must:

1. Know minds and how to change them.
2. Be able to grow the next generation of IT leaders.
3. Innovate and create new products and services.
4. Responsibly manage customer information.
5. Manage technology literacies.
6. Implement cost accounting.
7. Be globally aware.
8. Be adept at storytelling.
9. Enable collaboration across the enterprise.
10. Deliver tools that enable foresight and insight.
11. Understand what's needed for regulatory compliance.
12. Have a grasp of packaging and sourcing work.
13. Be fully cognizant of information security.

Regulatory compliance, packaging/sourcing work and information security weren't surprises. These topics have been covered in articles and con-



ferences to the point of nauseating excess. The remaining 10 skills reveal a great deal about the insight of the people who will be at the helm of technology in the next five to 10 years.

I was initially surprised to find "Be able to grow the next generation of IT leaders" close to the top of the list. But next-generation leaders are fed up with having to work from ignorance and make do with the skills at hand. Having come of age in a period when money for professional development was very limited, this generation has a history of acquiring skills on the cheap. Its members take their lesson where they find them and excel at extracting leadership nuggets from their environment. Current leadership should be aware that their actions are being scrutinized.

The next generation is unusually sensitized to the importance of mental models (how people think) and the process of changing how people think. One of the questions most frequently posed to high-performance CIOs is, "How did you convince Executive X to support Action Y?"

Next-generation IT leaders are totally in sync with senior management's desire to improve the top line by creat-

ing IT-enabled products and services.

Led by academics like Rashi Glaser of the Haas School of Business at the University of California, Berkeley, next-generation IT leaders recognize that the customer — and, more specifically, information about the customer — is a company's most important asset. Since the inappropriate management of customer information is in the news nearly every day, they see a need for significant improvements and investments in this area.

Next-generation leaders are knowledgeable about the criticality of correctly timing technology entrances and exits. The cost microscope they grew up under makes them aware of the need for fiscal transparency, and low-cost broadband has connected them to global markets and competitors for their job. The next generation is very aware of global competition.

And the truly insightful in the next generation are putting down their BlackBerry devices, papers and cell phones and spending time fine-tuning their ability to sell compelling stories.

Having spent time with the next-generation IT leaders, I think the future is going to be bright indeed. **© 85236**

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READERS' LETTERS

Electronic Medical Records Need Capital

THE ARTICLE "Graphic: Electronic Health Records Needed in U.S." (QuickLink 54530) regarding the push toward electronic medical records addresses a theme that can enhance the quality of medical care. What the article didn't address were the obstacles blocking universal implementation.

Cost is one of the foremost obstacles. At a time of rising malpractice costs and a stagnant reimbursement schedule, it's unlikely that most medical practices will embrace technology that requires a substantial initial investment and the ongoing costs of software maintenance and staff training. The costs of running a medical practice make the addition of electronic medical records a luxury, and until the physician community is willing to contribute to the cost of establishing computerized clinical systems, there is little financial mo-

ivation to adopt a new way of doing things. Without the infusion of capital into the medical system directed toward computerization of clinical care, it is unlikely that the rate of adoption of computers will change.

Carrie M. DeLoach, M.D.,
St. Louis, delet@msn.com

Encrypt All Data

I APPLAUD C.J. NELLY in her effort to creatively comply with a pending law in her state's legislature to secure personal information ("Protecting Consumer Data on the Cheap," QuickLink 54507).

But I would argue that what she is doing isn't enough. Besides building an IDS, she also needs to think about encrypting the underlying data. Network cryptography devices from companies such as Cipher have been used by the federal government and banking industry

for years. Encryption capabilities are also available in many routers. To protect data leaving the premises and also automatically decrypt data once it hits the remote office router, VPN concentrators also have a place in branch connectivity solutions. But tapes, CDs, DVDs, disk drives and other storage devices will continue to leave the premises, either through off-site data rotation, for disaster recovery, decommissioned equipment or outright theft.

Unfortunately, there are few tools

out there to help encrypt data on storage devices and manage all of the encryption keys.

David Edberg

Director of High availability

solutions, Coredian LLC, Chicago

Tips Were on Target

READ RECENTLY every article that appears on the subject of research, and I can assure you, as

a certified résumé-writing professional, that the advice written by Douglas B. Richardson is some of the most accurate I have seen in some time. ("When a Lengthy Résumé Makes Sense for Executives," QuickLink 54549). His analysis, understanding and conclusions on this issue are totally on the mark.

Grand Coop, CRW Strategic Resources, New Orleans, www.gcrs.net

COMPUTERWORLD welcomes comments from its readers. Letters will be edited for brevity and clarity. They should be addressed to: James Edele, letters editor, Computerworld, PO Box 9971, 15000 Stevens Creek Boulevard, Folsom, Calif. 95030. Fax: (509) 879-4843. E-mail: letters@computerworld.com.

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FUTURE WATCH

Internet Pioneer Looks Ahead

Leonard Kleinrock, the man behind packet switching, predicts the advent of "really smart" handhelds with features such as haptic interfaces. But he warns of out-of-control complexity. **Page 24**

Neither Rain Nor Sleet Nor . . . Hurricanes

A Florida berry supplier turns to MessageOne's Emergency Mail System to ensure e-mail continuity during all sorts of disasters, including Hurricane Charley. **Page 22**

SECURITY MANAGER'S JOURNAL

Eying an Opening

For Open-Source

C.J. Kelly is pleasantly surprised when her boss takes an interest in exploring some open-source security options. **Page 25**

Rights OF PASSAGE

ENTERPRISE RIGHTS MANAGEMENT SOFTWARE ENSURES THAT SENSITIVE DOCUMENTS AND E-MAIL CAN BE CIRCULATED AND DON'T END UP IN THE WRONG HANDS. BY ROBERT L. MITCHELL

WHEN CORNING INC. began selling products for military and aerospace use, the optical-fiber and cabling product manufacturer needed a way to show that it was following export controls and handling sensitive documents properly. "The government regulations are very explicit," says James Scott, director of knowledge and information management.

To meet those requirements, the Corning, NY-based company deployed enterprise rights management (ERM) software from Liquid Machines Inc.

Corning's research and development staff uses the software to encrypt critical documents and apply rules that determine not just who has access to the files but also whether they can print, copy or forward them to others. The system also establishes a chain of custody, providing an audit trail of who accessed a document when and what they did with it. "We can put our hands on our hearts and say we know we are compliant," Scott says.

Government contractors such as Corning aren't the only organizations thinking about document security these days. Recent high-profile data thefts and government regulations covering everything from financial disclosure to customer privacy have businesses worrying about where sensitive e-mail is going. IT organizations are struggling to control both dissemination of and access to corporate data contained in e-mail messages. Word docu-



1 Smart with high-value documents. Broad deployment of the technology won't work because most systems rely on users to apply policy templates. Although tools can be intuitive, users may find them cumbersome.

2 Know what types of documents you need to protect. All vendors support Microsoft Office and Outlook and PDF files, but support for other client applications differs. Some vendors offer a universal agent, while others require application-specific agents to be purchased for each document type to be protected.

3 Classifications are key. Defining document classifications and developing policies that meet business needs are key steps to

Here are five things to think about before deploying an ERM system.

success - and the most time-consuming part of setting up a successful ERM system.

4 Think outside the ERM box. ERM systems and the policy classifications created should dovetail with records management, electronic content management, e-mail and other systems such as engineering software. Look for partnerships with the vendors of your software.

5 Understand the implications of widespread encryption. Protected files are encrypted. That means knowledge management, e-mail archiving, virus scanning, business continuity and other systems may be affected unless those programs are integrated with the ERM system. - Robert L. Mitchell

ments or other electronic document formats. Leaked customer data or an untimely release of financial information can lead to public embarrassments as well as legal fines.

But Corning, like many other organizations with large R&D investments, has another concern: protecting documents pertaining to intellectual property that it's developing. "Many companies are very lax in their understanding and use of [ERM] as a way to protect their intellectual property," Scott says.

ERM Inside

Like digital rights management software, ERM products lock documents by encrypting them. But while DRM focuses on the consumer, ERM systems are designed to support document security policies both within and between businesses and to provide an audit trail (see diagram on page 20).

In an ERM system, a policy server stores encryption keys, authorizes user access to documents and maintains policy templates that store rules that dictate what users in different roles can do with different classes of documents. Users then apply those policies to documents as they create them. Most products require users to run agent software or plug-ins designed to work with specific applications, such



products but offer relatively limited application support. Most support Office, Acrobat, HTML and Outlook documents, as well as common image formats, such as TIFF. But few support files created for other applications, such as computer-aided design systems.

Legal Challenge

Application support issues held back Fred Pretorius' Microsoft RMS installation at Mintz, Levin, Cohn, Ferris, Glucksky and Pope PC. The Boston-based law firm wanted to use RMS to protect documents both internally and when routed among its six regional offices. "You don't want someone to just forward things out," says Pretorius, acting director of information services.

Although the practice uses an all-Microsoft IT infrastructure, desktops had to be upgraded to Office 2003 before RMS could be deployed. And that couldn't happen until compatibility problems with the law firm's enterprise content management system were resolved. In the interim, Pretorius could have used third-party agent software on desktops to allow office applications to work with RMS. He passed on the work-around. "It's the interaction of these add-ins that sometimes causes problems," he says. "You're better off waiting for Microsoft than dealing with the integration nightmares."

The system is now in pilot, with a full rollout expected this month. It hasn't been difficult to set up, and users find the interface easy to use, Pretorius says. But he wasn't able to avoid other integration issues related to antivirus, e-mail archiving and enterprise content management systems. Once content is encrypted, it can't be scanned. Without adequate safeguards on the desktop, some users could encrypt infected files and spread a virus by routing them to others.

Pretorius' e-mail archiving vendor, Veritas Software Corp.'s KVS Enterprise Vault, doesn't have rights to view encrypted files and therefore can't index them for searches. But he says users are willing to live with that for now. "It's an out-of-the-box concern against security," Pretorius says. Microsoft product manager Prakash Lumba says Veritas is looking into building RMS integration partnerships with key vendors such as Veritas and EMC Corp.'s Documentum unit. IT should consider the implications of the widespread application of encryption to documents throughout the organization, says Burton Group's Henry. It could affect business continuity plans by slowing down the data-recovery process. Other challenges include the long-term archiving of content encrypted with proprietary techniques and the ongoing management of the keys to access it.

Currently, RMS lacks the centralized controls Pretorius would prefer. "Users have to remember to protect their content," he says. Pretorius says he'd like to layer on more-sophisticated policy services from Meridies Inc. or Liquid Machines that he hopes could be configured to automatically apply a rights management policy based on the user's role or the type of content being created.

Corning's Scott would rather not automate that process. "We want our users to think about document classification overtly," he says. The more immediate problem, he says, is creating document security "roles and rules," classifications and policies that

authenticated when they first open them and may be required to do so each time they view the files, or users may be issued a "lease" that allows access for a specified period.

When National Occupational Competency Testing Institute Inc. (NOCTI) needed to protect Web pages used for securing its online testing services, RMS alone wasn't sufficient. "It could not enforce the rights through a browser for a machine that was not a member of my domain," says Shawn Davis, IT manager. He uses GigaMedia Access Corp.'s GigaTrust product, which is built on top of RMS.

With GigaTrust, clients use a plug-in for Internet Explorer. GigaTrust hosts Microsoft RMS, which issues the encryption keys to unlock requested HTML test pages once registered users log into the testing Web site. Test takers can view and interact with Web pages, but they can't print or cut and paste content.

Because the client PC had to request a new license to retrieve each Web page and then decrypt it, load times were as long as eight seconds. "That was a killer for us," Davis says. After GigaMedia modified its software to allow local caching of the client-access certificate, load times dropped to about two seconds. Half of that time is taken up in decrypting the file, Davis says. The performance is now acceptable.

Dealing with document certificate expirations is another issue. If the defaults aren't set correctly for a given use case, IT managers could end up taking an angry call from the CEO, who could be locked out of files on his laptop while traveling. While NOCTI requires tight controls on lease times, Microsoft's Lumba says his company is more liberal, enabling rights to encrypted e-mail content for a year.

With 15% of NOCTI's customers using online testing, and demand growing at 30% to 40% a year, document security has been a critical part of obtaining new business. "It's been a big deal for us. The fact that we're using this technology has been a primary selling point for our customers," Davis says.

ERM technology is still maturing, says Henry. He describes current users as early adopters and says nascent industry standards aren't yet fully developed. For example, there are no established standards for agent software, encryption, key management or a common rights markup language. That could be a problem for large enterprises if business units end up using different products, he says, and it makes scalability outside of the enterprise more difficult. ERM systems are also expensive and may average \$100 to \$200 per seat and \$1 million or more for enterprise-wide deployments.

Nonetheless, ERM works well for "tactical" applications where security needs are high, Henry says. Protection of intellectual property, business-to-business e-mail containing sensitive content such as price lists, or strategic information shared among executives are all good places to start. And he warns that some users, particularly executives, may balk at the technology if it's too complicated.

But that's not a problem with executives at Pretorius' firm. "The enthusiasm for this is very high," he says. RMS has been reliable, Pretorius says, and with Service Pack I already out, he thinks there's no reason not to go forward. "I don't think anyone needs to wait," he says. **OB/BSB**

Microsoft's RMS is a good example of how an ERM system works.

1 The document creator receives policies from the server, which caches them for off-line use.

2 The author applies the policies to a document. The file is encrypted automatically, and rights are periodically attached.

3 The author distributes the file.

4 The recipient opens the file. The software agent or Dynamic Link Library within the application calls the policy server, which validates the user and allows the application to open the file. The application renders the file and enforces assigned rights, such as the ability to view, print, copy/paste or forward.

5 A log of events is sent back to the server to create audit trails.



fit business needs. These must also be consistent with document classification used in other areas, such as the corporate records information management and content management systems.

"You have to think ahead of time about what are the roles, the groups, and go through the homework of creating policies," says Henry.

That process can take more than a year, adds Scott, but he says it's essential to avoid "classification by exception." For Corning, that process was especially difficult because Scott identified few other companies that could serve as a model. While many have three or four classifications for paper documents, few have addressed electronic documents. "We have not found many leading examples," he says.

Going Outside

Extending the protection of documents outside of the corporate firewall presents a different set of challenges. A user who receives a document must receive authorization from the issuing policy server before it can be opened, so those services must be made accessible from the Internet. Recipients of protected documents must be au-

VENDOR OPTIONS

For help in sorting through the offerings of ERM vendors, see our Web site:
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IT WAS AUGUST OF LAST YEAR, and at the Naples, Fla., headquarters of Global Berry Farms, a grower and shipper of bush berries, was directly in the path of a hurricane named Charley.

That concerned MIS manager Brian Clancy because he hadn't yet figured out a cost-effective way to keep the company's e-mail up and running without interruption.

E-mail had become one of Global Berry's most important communication tools, and the company's five regional sales offices spread across the U.S. all relied on the Florida headquarters for their e-mail service, says Clancy. Global Berry uses Microsoft Corp.'s Exchange Server 2003 for e-mail, he says.

The IT staff had spent about a year reviewing the available options, and during that time, it decided that a clustered server environment was the only one that could provide a redundant, highly available e-mail system, he says.

"We market fresh berries — strawberries, blueberries and raspberries — highly perishable products, and our inventory turns over within 24 hours. We pull it in and ship it out as soon as possible," says John O'Connor, director of information systems at Global Berry. "In our disaster recovery plan, we were focusing on e-mail and what could we do to keep it up, keep it running."

However, the hardware complexities, lack of protection against database corruption and the problems — not to mention the cost — of implementing a cluster across geographic locations soon had the company pursuing other options, says Clancy.

After viewing an online demonstration of a Linux-based e-mail continuity product called Emergency Mail System from MessageOne Inc. in Austin, Global Berry's IT staff decided to deploy it in the company's Grand Junction, Mich., and Naples locations, he says.

Reliability at a Low Cost

The value of a system like MessageOne's EMS is that it provides a hot standby mail system in case the primary system goes down — and it costs much less than it would to create a fully redundant mail system in a second location, says Michael Osterman, an analyst at Osterman Research Inc. in Black Diamond, Wash.

An added benefit is that the system can be activated over the Web or by telephone within a very short time, and users can access the EMS service from any Web browser, he says.

Another key advantage of EMS is that it continually synchronizes with

NEITHER RAIN NOR SLEET NOR... HURRICANES

A Florida berry shipper finds a way to keep e-mail running under disaster conditions.

By Linda Rosencrance



users' message stores so that they have access to their calendars, contact lists and older e-mails for the duration of the emergency, Osterman says.

MessageOne is focused specifically on business continuity for e-mail, communications and applications. Other vendors, including FrontBridge Technologies Inc., MessageLabs Ltd. and Critical Path Inc., may focus more on security, compliance, hosted e-mail boxes, patch management and disaster

recovery, says Mark Levitt, an analyst at IDC in Framingham, Mass.

"MessageOne has a compelling message about getting users back up and running quickly — 60 seconds — in an emergency," Levitt says.

Implementation of EMS was pretty painless, Clancy says. The first thing Global Berry's IT staff had to do was work with the company's Internet service provider to create an additional mail exchange record for the compa-

ny's domain names, GlobalBerryFarms and GBFarms, that would point to the EMS system as the backup mail server. EMS is hosted at a disaster recovery facility in Texas, Clancy says.

"After that, I installed the software. It was a simple wizard that you go through — click next, next, next for everything," he says. "That installed the synchronization software that linked up our system with the EMS system to synchronize our contact records and calendar items."

Working with MessageOne, the IT staff took only a few hours to install the software on the two servers, configure it and put the system through some live tests, Clancy says. The system costs Global Berry \$5,500 per year, which includes three activations, he says. Additional activations are priced at \$1 per mailbox per month.

When Clancy installed the EMS software late last year, it didn't yet have the capability to replicate activated e-mail or previously sent and received items. Clancy says he's planning to look into that feature and will probably add it to Global Berry's package of services soon.

Showtime

When the power went out during Hurricane Charley, Global Berry activated MessageOne, says O'Connor.

"Then when the e-mail tried to get routed to Exchange Server and couldn't, the MessageOne systems realized Exchange Server was down and automatically switched over," he says.

Once the system fails over to MessageOne, it makes a copy of the inbound e-mails and stores them, explains O'Connor. When the power comes back on after a brief interruption and Exchange Server comes back up, MessageOne forwards those e-mails back to Exchange Server. Users don't even realize there's been a problem unless they've been notified that Outlook was disconnected, O'Connor says.

But if the power goes out and Exchange Server doesn't come back up for an extended period, MessageOne is activated and broadcasts alerts to users. They can then log onto a secure Web site set up by MessageOne where they can send and receive e-mails, he says.

"When the Exchange Server went down [during Hurricane Charley], we knew it was going to be an issue because the power could have been out for days, so we went ahead and activated MessageOne," O'Connor says. "And we were able to continue to operate flawlessly. Our communications were up and running, and we kept doing business, and our customers didn't realize that we had a problem." © 2003

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FUTURE WATCH

LEONARD KLEINROCK is emeritus professor of computer science at the University of California, Los Angeles. He created the basic principles of packet switching, the foundation of the Internet, while a graduate student at MIT, where he earned a Ph.D. in 1963. The Los Angeles Times in 1999 called him one of the "50 people who most influenced business this century."

Computerworld's Gary H. Antes interviewed Kleinrock in 1994 as part of the Internet's 25th anniversary celebration. Recently, Antes asked Kleinrock for an update.

You told Computerworld 11 years ago that the Internet needed, among other things, "a proper security framework." What about today? In the past 11 years, things have gotten far worse, so much so that there are parts of the population that are beginning to question whether the pain they are encountering with spam, viruses and so on is worth the benefit. I don't think there's a silver bullet. We need systemwide solutions. Strong authentication will help. IPv6 will help. Identifying the source of information — a networking issue — to make sure it's not being spoofed will help.

You called for better multimedia capabilities in 1994 as well. One of the major changes related to multimedia in these 11 years has been the explosion of what we call the "mobile Internet." There's this ability now to travel from one location to another and gain access to a rich set of services as easily as you can from your office. The digitization of nearly all content and the convergence of function and content on really smart handheld devices are beginning to enable anytime, anywhere, by anyone Internet — the mobile Internet. But there is a lot more to be done.

Such as? We have to make it easier for people to move from place to place and get access. What's missing is the billing and authentication interface that allows one to identify oneself easily in a global, mobile, roaming fashion. We [will] see this change to an alternate pricing model where people can subscribe to a Wi-Fi roaming service offered by their company or from their home ISP. As these roaming agreements are forged between the subscription provider and the owners/operators of today's disparate public-access networks, the effective number of locations where a subscriber will be able to connect at no or low fee will

grow. A key component in this environment is internetwork interoperability, not only for data traffic but for authentication and billing. The benefits will be ease of use and predictable cost.

You mentioned smart handheld devices. Where are they going? We are seeing your phone, PDA, GPS, camera, e-mail, pager, walkie-talkie, TV, radio, all converging on this handheld device, which you carry around in addition to your laptop. It will alter the properties of a lot of content — video, images, music

— to match what's come down to the particular device you have. For example, you may be using your handheld cell phone to serve as a pass-through device to receive an image or video that you wish to display on some other output device — say, your PC or your TV. The handheld may need to "dumb down" the image for itself but pass the high-quality stream to the TV, which will render the stream to match its — the TV's — display capability.

Is that capability of interest to corporate IT?

Absolutely. We see e-mail already on the handheld, as well as the ability to download business documents such as spreadsheets and PowerPoint presentations. We'll see the ability to handle the occasional videoconference on a handheld, as well as other media-rich communications. We are right on the threshold of seeing these multifunction devices. Of course, the human-computer interface is always a problem.

How right that improves? Voice recognition is going to be really important. And there will be flexible devices where you actually pull out keyboards and screens and expand what you are carrying with you. Haptic technologies — based on touch and force feedback — are not yet here, but there's a lot of research going on. For example, with a handheld, you could display a virtual keyboard on a piece of paper and just touch that.

You have warned that we are "hitting a wall of complexity." What do you mean? We once arrogantly thought that any man-made system could be completely understood, because we created it. But we have reached the point where we can't predict how the systems we design will perform, and it's inhibiting our ability to do some really interesting system designs. We are allowing distributed control and intelligent agents to govern the way these systems behave. But that has its own dangers; there are cascading failures and dependencies we don't understand in these automatic protective mechanisms.

Will we see catastrophic failures of complex systems, like the Internet or power grid? Yes. The better you design a system, the more likely it is to fail catastrophically. It's designed to perform very well up to some limit, and if you can't tell how close it is to this limit, the collapse will occur suddenly and surprisingly. On the other hand, if a system slowly erodes, you can tell when it's weakening; typically, a well-designed system doesn't expose that.

So, how can complex systems be made more safe and reliable? Put the protective control functions in one portion of the design, one portion of the code, so you can see it. People, in an ad hoc fashion, add a little control here, a little protocol there, and they can't see the big picture of how these things interact. When you are willy-nilly patching new controls on top of old ones, that's one way you get unpredictable behavior. © 2005

Internet Pioneer LOOKS AHEAD

Leonard Kleinrock predicts 'really smart' handhelds and haptic interfaces but warns of out-of-control complexity.



Leonard Kleinrock is a professor of computer science at the University of California, Los Angeles. He is a pioneer in the field of packet switching and the Internet. In this interview, Kleinrock discusses the future of handheld devices and the challenges of managing complex systems. He predicts that handhelds will become "really smart" and capable of displaying virtual keyboards and haptic interfaces. However, he also warns of the potential for out-of-control complexity and cascading failures in these systems. Kleinrock emphasizes the importance of understanding the underlying design and code to ensure safety and reliability. He also highlights the need for protective control functions to be centralized and transparent. The interview is set against a background of a circuit board, symbolizing the complex technology being discussed.

Eyeing an Opening For Open-Source

Our security manager is surprised when her boss takes an interest in exploring some open-source security options. By C.J. Kelly

IDON'T CARE MUCH for Monday morning meetings. Starting a week with a meeting always seems like too sharp a transition from the weekend. Eyelids tend to droop, including mine. But on one recent Monday, I snapped to attention when my boss, the IT chief for our agency, said that he had informed the agency's administrator that we would be going the open-source route on a number of fronts to increase efficiency, productivity and cost savings.

When I had suggested that idea to him six months earlier, he had been worried about integrating open-source applications into a purely Microsoft infrastructure. I had suggested using open-source software for applications that don't require integration but rather only compatibility with standards such as SNMP, TCP/IP, LDAP, Java, HTTP and XML, but I was pretty sure my proposal had fallen on deaf ears. I was wrong.

My boss had taken note of my successful implementation of an intrusion-detection system based on open-source software (Linux, Snort, PHP, Apache and MySQL), but I wasn't aware that he had developed a workflow application that uses a MySQL database. Now that I know he's open to implementing more open-source-based security devices, we're on our way to finding alternatives to over-priced commercial software.

Of course, we're a long way from putting Linux on the desktop, and our server farm is primarily Microsoft. But Pan-

SECURITY MANAGER'S JOURNAL

Linux perspective and test the interoperability between my system and the Windows environment.

Seeking Guidance

Some might think that my embrace of Linux is too gung-ho, but I've done my research. Several months ago, I was searching on the Internet for a guide on migrating from Windows to Linux. I found an interesting document from the German Federal Ministry of the Interior titled "Migration Guide: A Guide to Migrating the Basic Software Components on Server and Workstation Computers." Both German- and English-language versions of this comprehen-



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sive 400-plus-page document are available.

It starts off by covering key issues such as the following:

- Definitions of terms such as open-source, proprietary and commercial, and the distinction between replacing vs. continuing types of migrations.
- Migration paths (Windows as the starting point, and internal dependencies within the Microsoft landscape).
- Linux distributions (including Debian, SUSE and Red Hat).
- License models (GPL and BSD).

The next section provides in-depth technical descriptions of the migration paths, with the discussion covering file systems, print services, authentication services, network services, system audit and management services, directory services, middleware (.NET, COM, J2EE), Web services, SharePoint Portal Server, databases, groupware, Office/desktop migration, terminal servers and thin clients, and high availability. It sure sounds like the authors covered all the bases.

Then there's an exhaustive evaluation of economic efficiency. This may not appeal to techies, but it's the meat of selling a conversion program to senior management. The guide walks you through monetization and benefits analysis, total cost of ownership, comparability and the full-cost approach.

And there's more! The guide presents recommendations based on the evaluation of economic efficiency. In other words, based on your analysis of your infrastructure, you will either adopt a full and complete migration to Linux, a continuing migration or a partial migration.

My experience as a security manager also influences my attitude toward open-source. I

have spent close to 20 years working in the trenches in IT security, where you'd often hear the joke, "If it weren't for Microsoft, we'd all be out of a job." That's because Microsoft's closed operating system (and, just to be fair, we can accuse Apple's first-generation products of the same sin) has been fraught with technical flaws and security holes.

I'm not attacking Microsoft. It's one of the most successful companies in the world, and Bill Gates is one of the world's most generous philanthropists. I'd even go so far as to say that Gates and Microsoft brought computing out of the scientific community and into the hands of regular people. You have to give credit where it's due. Microsoft changed our world. However, the world is changing again, and this time proprietary technology is seen as the problem, not the solution.

My agency doesn't have the kind of budget that allows for blowing big bucks on Microsoft products, just as I can't blow big bucks at Saks Fifth Avenue. Most of us get along pretty well shopping at Walmart, and my agency will get along pretty well doing the open-source equivalent. We'll spend some money on hardware, then use open-source to manage the infrastructure and provide services for a fraction of the price of buying Microsoft's software.

Our next Linux-based security project is a firewall. I have experience with Cisco PIX and Check Point firewalls, so this will be an interesting project to plan and implement. I can compare the ease of administration and functionality as well as test my strategy, one device at a time, to convert our infrastructure to open-source. Wish me luck. ♦

WHAT DO YOU THINK?

The author's name is C.J. Kelly, whose name and contact info have been disguised for obvious reasons. Contact her at cjckelly@yahoo.com, or visit the discussion in our forum, bit.ly/1090.

To find a complete archive of our Security Manager's Journal, go online to computerworld.com/journal.

SECURITY LOG

Veritas Security

Times Exploited

Attackers have exploited security flaws in Veritas Software Corp.'s remote backup agents to take control of computers running the software, according to the U.S. Computer Emergency Response Team. The exploit, which was discovered by Veritas Corp. and reported by Veritas Software to the U.S. Computer Emergency Response Team, has been used to exploit a security patch issued by Veritas. The software is used to automatically back up loads of data on servers. Veritas notified customers of the danger June 22 and immediately issued a patch for affected versions of the software.

Microsoft Takes on Online Crime

Microsoft Corp. is providing Microsoft Internet Security and Privacy Initiative funds to help the FBI, Justice, the Commerce Department and child welfare agencies combat online crime. Set to expand to April, Microsoft will have more than \$100 million available to its products with the FBI's High-Tech Crime Technology Institute, providing a fund to encourage law enforcement on cyberviolence and conducting training to help the justice system use the software, Microsoft said.

Start-up Unleashed

Security Dynamics is a start-up founded by former Veritas Software Inc. employees to combat the threat of viruses, worms and other malicious software. The company, which has raised \$10 million in funding, is based in Redwood City, Calif., and is developing a product that isolates a company's IT infrastructure from the Internet. Security Dynamics' software, called SafeGuard, will block malicious software from entering a company's network, and will also monitor and analyze network traffic to detect and remove malicious software.

BRIEFS

Orchestra Tool Aids Policy Management

■ Orchestra Corp., a New York-based provider of active policy management software, has launched Orchestra 4.0. The system, which manages policy compliance for e-mail, instant messaging and other communication channels, includes a Web console feature that's designed to provide simplified surveillance capabilities. Pricing starts at \$120 per seat.

PwC Content Used In Security App

■ Brubaker Inc. will include PriceWaterhouseCoopers' information security content in its Enterprise Security Architecture System. Originally developed by PwC, ESAS is a Web-based tool that helps users ensure that they comply with IT security guidelines. McLean, Va.-based Brubaker purchased ESAS from PwC in April. Pricing will start at \$75,000.

Indicative 7.0 Ships

■ Indicative Software has released a new version of its IT service management software. Indicative 7.0 includes new features that allow users to follow the path of business transactions via components such as JavaBeans and services, according to Fort Collins, Colo.-based Indicative. The Java-based software also includes auto-discovery and agentless monitoring of Citrix MetaFrame and IBM AIX systems. Pricing is \$65 per measurement; bundled pricing starts at \$300,000.

Mandriva Upgrades Security System

■ Linux vendor Mandriva SA has released the second version of its Multi Network Firewall (MNF2) infrastructure and security system. Features include OpenVPN, network interface bonding and bridging, traffic shaping, network mapping and peer-to-peer sharing. Price-based Mandriva said, MNF2 retails for \$560.

DOUGLAS SCHWEITZER

Cracking Down on Intellectual Property Crime

IN FEBRUARY OF THIS YEAR, 24-year-old Juju Jiang of Flushing, N.Y., was sentenced to 27 months' imprisonment followed by three years of supervised release and ordered to pay \$201,620 in restitution after being convicted of charges related to computer fraud.

On March 4, Rolyin Abuguz, 24, of Corona, Calif., was charged with criminal copyright infringement for uploading onto the Internet a copy of the movie *Finding Neverland* that had been sent to a "screener" for the Producers Guild of America. Just four days after that, Seth Kleinberg, 26, of Pasadena, Calif., Jeffrey Lerman, 20, of College Park, Md., and Albert Bryndza, 32, also of Flushing, pleaded guilty to felony charges of conspiracy to commit criminal copyright infringement in U.S. District Court in New Haven. They were the first U.S. cases to be brought as a result of an 18-month, multinational software piracy investigation known as "Operation Higher Education."

In recent years, we've witnessed a dramatic increase in cases of digital piracy and counterfeiting. The legal system is responding with aggressive prosecution and tough sentences.

While the latest technologies are a boon for upstanding organizations, large and small, they serve less-respectable individuals and organizations as well. The worldwide trade of pirated and counterfeit goods affects all major markets, with the U.S. in the forefront. That's not surprising, since the U.S. leads the world in the development of intellectual property and the manufacture of IP-related products. (It was recently reported by the International AntiCounterfeiting



Coalition that U.S. industries that rely on copyright protection and derivative businesses account for more than \$433 billion, or 5.68% of the U.S. gross national product — more than any other single manufacturing sector.)

Illicit trade threatens the competitiveness of both established companies and up-and-coming businesses — and the livelihoods of all of their employees. Available for purchase

from lowly street vendors to large-scale mail-order organizations are all sorts of counterfeit goods, with DVDs, CDs, electronics and software at least as popular as the more traditional watches, auto parts, perfume and clothing. It is estimated that these goods account for up to 7% of the world market and cost legitimate businesses several billion dollars annually.

It's obvious that legitimate rights holders lose money in the form of reduced sales and profits when their goods are counterfeited; what's not as obvious is that there are other consequences as well. For one thing, manufacturers of bogus merchandise don't observe manufacturing standards and regulations. As a result, bogus goods are of inferior quality. This fact certainly isn't lost on the consumers; they probably just ignore the shortcomings in the interest of saving money, but later they may be disappointed to realize that there's no support or recourse available to them after the purchase.

Moreover, the counterfeitors don't comply with regulations pertaining to the safety and health of their workers. And they don't pay duties or taxes, so the nations where the goods are traded lose out on potential tax revenues.

Intellectual property crime generally falls into one of three categories: copyright violations, theft of trade secrets and trademark infringement. The fundamental goal of each crime is for the perpetrator to realize a profit — at the expense of the real McCoy. Copyright violation most often refers to the counterfeiting and piracy of software, movies and recorded music. Theft of trade secrets means the perpetrator has stolen proprietary information from any industry; it could be a manufacturing business, a financial services firm or a technology company. Trademark infringement involves the counterfeiting and vending of brand-name items — handbags, clothing, watches and the like.

With so much at stake, organizations and governments are stepping up efforts to stem the looting by counterfeiters. They're having some success with the new technologies that aid in the identification of counterfeit products. While useful, these technologies do have limitations. No single anti-counterfeiting system will solve the problem for all victimized businesses. Each organization must determine its specific market's weaknesses and take at least some responsibility to protect its interests.

When it comes to counterfeiting, everyone is an interested party, from the legitimate manufacturer to the retailer, the distributor and the individual consumer. When all parties act together, a united stance will prove to be the best defense against these felonies. © 55280

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When it comes to counterfeiting, everyone is an interested party, from the legitimate manufacturer to the retailer, the distributor and the individual consumer. When all parties act together, a united stance will prove to be the best defense against these offenders. © 2005

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MANAGEMENT

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Think Tank

Forrester Research says most corporate Web home pages are dysfunctional; and a new book says it's time to move beyond "business alignment" into "business-technology convergence." Page 30

Career Watch

The CIO of the Department of Veterans Affairs discovers a program to hire disabled veterans; the current value of an MBA trumps that of experience, and read about the best vacation you never took. Page 33



OPINION Useless People

How do you deal with useless employees? Columnist Paul Glen says the first step is to define "useless." Page 34



Love THAT Legacy'

Like it or not, old code is still around, and it needs special care. By Gary H. Anthes

QUIZ: WHAT IS "LEGACY" SOFTWARE?

- _____ Code that's hard to maintain
- _____ Software written before 1990
- _____ Applications that have become obsolete
- _____ Poorly documented systems that no one wants to touch
- _____ Broken, unreliable and ineffective stuff that just hangs around, year after year

Interviews with a number of IT managers turned up all of those definitions, and more.

"Legacy is a word I despise," says Frank da Cruz, an IT manager at Columbia University in New York. "People say 'legacy' and it's like, 'Oh my god, how could you possibly use that old garbage?' But what it really means is that it was written by smart people a long time ago and it really works, instead of being the latest bug-ridden, bloated piece of garbage from some company that has only teenagers working for it."

However you define legacy software, IT people say they know it when they see it, and they know it didn't all go away during Y2k remediation. It's the stuff with poor documentation, spaghetti code stirred by too many cooks, and processing cycles more

appropriate for 1970s ways of doing business. And it's definitely not the stuff you tell college recruits about when they come looking for Java, Web services and grid computing.

Yet, like da Cruz, a number of IT folks swear by it, not at it, saying they wouldn't dream of switching that trusty old accounting system they custom-coded in the 1980s for some newfangled commercial package with a seven- or eight-figure price tag.

But even the most enthusiastic of the legacy loyalists acknowledge that old software often presents special challenges. They employ a number of tricks — both managerial and technical — to keep the hits flowing in those old pipes.

Not Older, Better

For Paul Grant, director of retail systems application development at Tower Records in West Sacramento, Calif., "Legacy" is when the technology can no longer fit the business needs. By that definition, Tower's retail point-of-sale software, some 1 million lines of Cobol code dating to the mid-1980s, isn't legacy software.

Although Tower is modernizing it in various ways — by adding Web service interfaces to other systems, for example — the underlying Cobol application is likely to serve the company for years to come, Grant says. "A lot of people got caught up in the wow and sexy stuff, but I've been a proponent of keeping what we have rather than starting all over, because I don't see the benefit," he says.

But it would be a mistake to think that Tower Records got its million lines of Cobol to its current useful and reliable state without a great deal of effort. Tower bought the software in the early 1990s from a small vendor that supplied point-of-sale systems to mom-and-pop video-rental stores. "The source code was terrible," Grant recalls, "and we had no documentation."

Tower wrote its own user manuals, which it eventually gave the vendor as partial payment for the source code. As for the software, "it was spaghetti code, with a few meatballs thrown in," Grant says. "Anytime we opened the code to make changes, we'd do as much maintenance as possible."

But, Grant notes, "we ran into situations where we just couldn't untangle the mess, so we left it. We didn't want to break it."

More recently, Tower has been able

Words TIME Forgot

Frank da Cruz, an IT manager at Columbia University, says it's not fashionable to admit to running old systems. "People say they have to have the latest version of Windows and the latest version of acronym or buzzword or their stock will go down," he says. "But the people in the back office are running something that's really battle-proven and tested and secure, like VMS, for example."

Da Cruz is the author of an online history of computing. Among the terms to be found in it is his "Glossary of Forgotten Terms." Here's a sampling from the good old days:



For definitions of those terms and much more information about those old mainframes, check out da Cruz's Web site: www.columbia.edu/its/it/history

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written for other retailers was thrown away. It took three to four years of "blood, sweat and tears" to do that, Grant says. "Anytime we opened the code to make changes, we'd do as much maintenance as possible."

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More recently, Tower has been able to avoid much of the previous angst by using the AculBench Cobol development tool from Acucom Inc. in San Diego. It replaces, among other things, a Unix-based VI editor that Grant describes as "terse and slow" as well as manually written editing and searching scripts. AculBench greatly speeds

maintenance and debugging work, and it helped Tower "untangle the spaghetti code," he says.

Business Trumps Tech

The Ship Systems unit of Northrop Grumman Corp. in Pascagoula, Miss., has about 7 million lines of mainframe-based Cobol and Fortran code. Dating from the late 1970s and early 1980s, it supports finance, human resources, payroll, materials management and some engineering applications.

Jan G. Rideout, a vice president and CEO, says there's not much of a technical case to be made for replacing the old code with something more modern. "Maintaining those systems is pretty easy for us," she says. "The mainframe environment is very secure, configuration management is excellent, and we have excellent tools."

But can we find people to maintain those dusty old systems? "We have a very low attrition rate," she says. "We do hire programmers out of college, and we do teach them Cobol."

Nevertheless, for business reasons, Ship Systems decided two years ago to scrap most of the legacy code in favor of packaged software from SAP AG.

The legacy software is no longer flexible enough to meet the needs of the business units, Rideout says. "It limits the types of really large process improvements they could make," she says. "While they can make incremental, small changes, this basically dictates the way they run their business."

For example, Rideout says, using wireless I/O devices at the company's shipyards would be very attractive, but it would require building a whole new set of applications on top of the legacy systems.

Still, Rideout cautions managers not to expect big maintenance cost savings after SAP has gone live. "That's overhyped by the suppliers who want to encourage you to replace your mainframe systems," she says.

But during the long SAP phase-in, Rideout says, she'll continue to pay close attention to the personnel issues presented by a 250-person IT organization going through a major transition. Knowledge of older systems in the heads of older workers must be shared with younger workers, who in turn must be given a chance to work on more modern technologies, she says.

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Bill DeRossi, vice president of IT management at DaimlerChrysler Services Americas in Farmington Hills, Mich., says he has three major systems that are more than 15 years old, including a wholesales system that tracks vehicle inventories on dealer lots. "We have looked at them from time to time and haven't come up with a real good reason to replace them," he says.

In fact, those mainframe Cobol systems provide a model for modern distributed systems when it comes to security, maintainability and change management, he says. "We are reinventing the wheel in the client/server world in terms of putting the disciplines in place that we already know how to do on the mainframe," DeRossi says.

But he acknowledges that maintaining old Cobol systems isn't what his developers want to do. "So we see this as a great opportunity to go offshoring," says DeRossi. "The main driver for the legacy systems is people, and India gives us a way to prolong the life of these systems."

Indeed, another automaker has also found that the way to deal with legacy headaches is to outsource them to someone else. General Motors Corp. has turned over most of its late 1970s and early 1980s code to Electronic Data Systems Corp. Still, GM holds an annual review of those systems to determine whether any of them ought to be modernized or replaced.

And, says Fred Killeen, acting chief technology officer, GM enthusiastically entertains suggestions from EDS as to how the systems might be improved. "It's the kind of thing we want suppliers to bring to us," he says. **© 2005**

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COBOL (pronounced "co-bol")
A programming language for business applications. It's based on the English language and uses a lot of punctuation. It's been around since the 1960s and is still in use today.

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into these older systems and see that there are some interesting aspects to them," Rideout says.

Bill DeKoska, vice president of IT management at DelphiChrysler Services America in Farmington Hills, Mich., says he has three major systems that are more than 15 years old, including a wholesale system that tracks vehicle inventories on dealer lots. "We have looked at them from time to time and haven't come up with a real good reason to replace them," he says.

In fact, those mainframe Cobol systems provide a model for modern distributed systems when it comes to security, maintainability and change management, he says. "We are reinventing the wheel in the client/server world in terms of putting the discipline in place that we already know how to do on the mainframe," DeKoska says.

But he acknowledges that maintaining old Cobol systems isn't what his developers want to do. "So we see this as a great opportunity to go offshores," says DeKoska. "The main driver for the legacy systems is people, and India gives us a way to prolong the life of these systems."

Indeed, another automaker has also found that the way to deal with legacy headaches is to outsource them to someone else. General Motors Corp. has turned over most of its late 1970s and early 1980s code to Electronic Data Systems Corp. Still, GM holds an annual review of those systems to determine whether any of them ought to be modernized or replaced.

And, says Fred Killeen, acting chief technology officer, GM enthusiastically entertains suggestions from EDI to how the systems might be improved. "It's the kind of thing we want suppliers to bring to us," he says. © 2005



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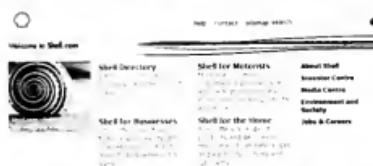
FOR IT EXECUTIVES

Global Home Pages Receive 'Abysmal' Report Cards

A GLOBAL CORPORATION's Web home page is an entry point for every conceivable visitor, from investors and business partners to customers, and research shows that you have only eight seconds in which to make a good first impression. But most corporate home pages are "abysmal," says a report by Forrester Research Inc. analyst Ron Rogowski.

Rogowski analyzed the home pages of the 100 biggest global companies and found a sea of wasted space, navigation problems, cryptic categories and "blocks of mire marketing messages."

The key is to conduct usability research and analyze clickstream data to figure out what visitors really want to do when they



reach the home page. Success is measured not by how much time the visitor lingers, but by how fast the home page routes him to the right regional sites or product page, Rogowski says.

The study found some pockets of enlightenment, at BP PLC in London, Royal Dutch/Shell Group of Companies in The Hague and Credit Suisse Group in Zurich. These companies track the user path off

the home page to identify the most-visited areas. This guides decisions about which content and links should be included on the home page.

Royal Dutch/Shell takes it a step further and adjusts the page based on the day of the week. On weekdays, it features content aimed at investors; on weekends, it switches to content for consumers.

— Mitch Bets

Best Bits

The most useful parts of recent business and IT management books.

TM: *The 2nd Digital Revolution* by Stephen J. Andriole (CyrusTech Publishing, 2005)

Apparently, in the first digital revolution, IT was used for tactical operations, whereas in the second revolution, IT is at a strategic level. I'm not so wild about the title, but the book itself has a good deal of content about the role IT needs to play in corporate America. For example, Andriole says it's time to move beyond talking about "business alignment," which is a sequential approach, and take a more holistic approach that recognizes that business and technology are so intertwined, it's hard to tell where one ends and the other begins. Andriole — a professor at Villanova University and a Culler Consortium consultant — calls it "business-technology convergence." CRM is a great example; it's both a business model and a

technology. Or, as one present CEO used to say, "There are no technology decisions — only business decisions."

The book covers a lot of other ground, from IT governance to staffing. But it's the no-nonsense statements that I like best. On the subject of IT standardization, Andriole says variation is just plain stupid.

As for return on investment and total cost of ownership metrics, he says that they're great, but "you can't build a business with these metrics." Andriole adds that "obsessive-compulsive TCO/ROI behavior is as unhealthy as any obsessive-compulsive behavior."

And to answer Nicholas G. Carr's question as to whether IT matters, the author replies: "By telling a CEO that a batched \$100 million ERP system doesn't matter." • **55116**

— Mitch Bets

ABOUT THE AUTHOR: MITCH BETS is a Visit our blog: www.computerworld.com/blogs/bets

The IT Economy

SECURITY IS UP,
ERP IS DOWN

- 1 Security
- 2 Database
- 3 Storage management

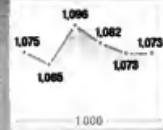
- 1 ERP
- 2 Desktop applications

BY MICHAEL COOPER/THE WALL STREET JOURNAL

Buying Intentions

A IDC research report that tracks the index of business IT demand (below) shows that user spending expectations were unchanged last month. IT buyers are full of "guarded optimism," IDC analyst Carol Chisholm says, which means "users are preparing for measured economic growth, even if they're not entirely convinced that the economy will continue."

INDEX OF BUSINESS IT DEMAND 2005



The buyer interest index is based on monthly surveys of 400 to 500 U.S. CIOs and business executives, who are asked about IT spending expectations for the year. The index is a composite of 10 sub-measures, including IT spending on hardware, software, services, and consulting. An index of 1.000 means no growth. Current buying intentions don't change significantly from the previous month.

ABOUT THE AUTHOR: MICHAEL COOPER is a

ThinkTank

BRAIN FOOD FOR IT EXECUTIVES

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the home page to identify the most-visited areas. This guides decisions about which content and links should be included on the home page.

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SECURITY IS UP,
ERP IS DOWN

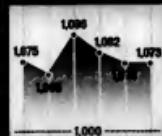
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Database

Storage management

ERP

Desktop applications



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Mobile & Wireless World (M&WW), in conjunction with Computerworld, proudly presented the third M&WW "Best Practices in Mobile & Wireless" Awards Program. This program honored seven IT user "best practice" case studies selected from a field of qualified finalists.

Winners were recognized at the Mobile & Wireless World Awards Ceremony - Wednesday, June 15th in Scottsdale, Arizona



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- Zipcar, Cambridge, Massachusetts

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Business Evolution through Mobilizing Field Workers

Recipients

- Maytag Corporation, Newton, Iowa
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Honorable Mention: The ServiceMaster Company, Downers Grove, Illinois

Managing Cellular Mobile Data

Recipient

- The PMI Group, Incorporated, Walnut Creek, California



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To evaluate nominations, judges considered each project's:

- Strategic importance to the business
- Positive impact on other business/organization units
- Substantive customer impact (service, revenue, acquired)
- Ability to provide a strategic advantage to the business/organization and/or demonstrate the deployment of future mobile & wireless initiatives
- Financial return and measurable payoffs (return on investment, revenue, resources) through created/duplicated revenue opportunities or cost savings
- Ability to address challenges of data, information and application security, etc.

Thank you to our "Best Practices in Mobile & Wireless" Judges for 2005:

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- Bruce Hart, Technology Journal and Network World touring editor
- John King, Executive Editor of Events and Special Correspondent, Computerworld
- Ed Meldell, Publisher, Mobile Emergency Alert System
- Ralph Michaels, Service Program Manager, Pitney Bowes, Inc.
- Jay A.T. Sallot, Senior Manager, Pfizer Global Pharmaceuticals
- John Shulman, Director of Research Operations and Principal Business Analyst, Research Resources Group
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EMPLOYEE DEVELOPMENT ON A SHOESTRING

Boosting skills needn't take much extra time or money, but it does require thought and effort. BY DAVID PUTRICH

YOUR ORGANIZATION is only as effective as the people who work there. And the best way to develop an effective and motivated workforce is to keep people challenged. So why is employee development often overlooked at U.S. companies?

A study by Lominger Limited Inc., a leadership development consultancy in Minneapolis, looked at how well managers at many levels and across multiple industries performed

in 67 defined competencies. At the bottom of the list was "developing direct reports."

Another workforce development firm, Development Dimensions International Inc. in Pittsburgh, reports that "developing others" is rated the lowest of 22 leadership competencies.

Experts estimate that about one in three workers has a written skills-development plan and is executing it. But are these employees getting better? At which skills? How

IT MENTOR

good do they have to be? And at what? And what about the other two-thirds of workers? Are they getting better at anything that matters?

Consider your own organization. How much more successful could your IT department and company be if your development efforts were truly focused? Are managers rated on how well they help direct reports develop skills?

Even when employees are given training opportunities, it's not always clear that the training results in the expected outcome. According to psychologist Daniel Goleman, who wrote *Working With Emotional Intelligence* (Bantam, 1998), "Estimates of the extent to which skills taught in company training programs carry over into day-to-day practice on the job are low—and gloomy—as a mere 10%."

To managers, that news is disheartening. But there is hope. Many organizations give high priority to developing employees, and — training budget or no training budget — anyone can do it. So before you say, "I can't do any skills development because the training budget was reduced to zero," consider this statistic from Lominger: 70% of what we learn as adults comes from our work experiences, 20% from a coach, and 10% from classes, work-shops, books and articles.

Given that finding, the bulk of any individual's development plan should consist of work activities. And there are some specific and tangible things a manager can do to help employees develop their skills:

- First, let your boss know what you're doing; you might want to establish a performance goal for yourself of developing your people. If the management team hasn't done much in terms of workforce planning, you may need to discuss future directions.

- Set aside time with each employee to discuss his career goals, particularly his understanding of potential roles in the organization. Suggest that the employee find a mentor to counsel him on long-term goals.

- Discuss the employee's short- and long-term development needs toward those goals.

- Help the employee understand which skills — technical, process and interpersonal — your department and company need. Role definitions come in very handy here.

- Help the employee understand his current skill level and desired level.

- Coach the employee on his development strategies. Where appropriate, suggest courses or workshops. Most important, identify specific work activi-

DO IT YOURSELF

If you're an IT employee, managing your own career should be a top priority. Here are some simple steps to follow:

THINK of career goals three and five years out.

DETERMINE which roles will be available and which skills will be needed at your company.

FIND a mentor.

ASSESS your skill levels and identify short- and long-term development needs to reach your goals.

KEEP IN MIND that developing skills takes time and requires small, day-to-day steps, start now.

WORK on one or two skills at a time. Consider activities outside of work to boost your skills.

ASK your supervisor to recommend a coach and a role model.

ASK for constructive feedback from colleagues. **REFLECT** on your efforts. What worked? What didn't? What did you learn? / By new class

— David Putrich

ties — a project, a committee, a special team, even something outside of work such as a volunteer activity — that will help. Make sure participating in these activities is included among the employee's performance goals.

■ Stress that skills development comes in small, day-to-day steps, and reflect that in the development plan. Suggest a peer who can coach the employee, as well as a role model.

■ Provide constructive feedback and encouragement as the employee makes changes in behavior.

■ Encourage the employee to reflect on his plan and efforts: what worked, what didn't and what else to try.

Organizations that put a high priority on employee development stay fresher and are more capable of changing as business conditions require. Moreover, we know that challenges and opportunities to learn drive higher levels of job satisfaction, commitment to the organization, mental and physical health, and life satisfaction.

Employee development can be a simple process. It doesn't need to take much extra time, nor does it require a big budget. Can you afford not to invest your time and energy in developing your people? **□ 85574**

Putrich recently retired from the central IT group of 3M Co., where he spent his last seven years working in employee development. He is a consultant and an adjunct professor at Concordia University in St. Paul, Minn., and Cardinal Stritch University in Edina, Minn. Contact him at djweb@msn.com.

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Career Watch

It may be getting harder to find anyone who still has a sense of humor about it all. On the one hand, disabilities are often treated almost as normal. But how's that supposed to be? On the other hand, laid-off veterans don't

get a laugh when they say they don't have a job, which should be the last thing on their minds. In their opinion, the work they used to do, is a measure of the world. A lot of veterans in technology, and especially test engineers, say of ousted Art Director, Mike O'Leary, "He's a visionary." Plus, prospects to be a visionary, but of course, not in the

Best Vacation

agent, "Tommy Cook," who says he is offering retirement vacations. Cook's plan, as explained up by Bushnell, is to have a travel trailer to go on vacation destinations for free. So, for example, a Montana off-road vehicle will drive around Africa, prices for you, and a "Chinese guide in Beijing" will visit the

Great Wall and send you pictures of it." The savings come from those guides doing the same job for lots of people at the same time. Bushnell, of course, but a very smile is hard to suppress.

— Sandy Gold

An MBA Pays (And So Does a Y Chromosome)

When it comes to IT salaries, an MBA trumps experience, according to a survey of 55,000 IT workers from 1999 to 2002.

An MBA degree from a two-year program can boost a person's salary by 8.2%, according to a study published last September by professor M.S. Krishnan and researcher Sunil Mittal of the University of Michigan's Stephen M. Ross School of Business. Meanwhile, two extra years of experience boosted a person's salary by just 2.9%.

The study, which cuts across a variety of job titles, including senior and

midlevel IT managers, also found that women in high-tech jobs earn 7.8% less than men with similar positions, educational backgrounds and work experience. "In general, whether they have an MBA or don't, compensation for women continues to trail men," says Mittal. "We don't come to the conclusion that there is discrimination against women, just that they lag in earnings."

Across industries, Krishnan and Mittal found that technology firms pay 8.4% higher wages than non-tech companies.

— Thomas Hoffinan

this first effort, the [DIT] tasked their staff in September 2004 to broaden this program to attract young veterans and in particular young service-connected disabled veterans.

In September 2004, DIT began working with Walter Reed Hospital to establish a partnership program between VA and DOD that would enable disabled service members to gain credible work experience by volunteering with VA while awaiting completion of their discharge, a period that can take from six months to two years.

As this program goes national, how many IT jobs are likely to be filled by disabled vets? There is no definitive answer to the question, as there are so many variables to consider: not the least is the disabled veteran's career ambitions. We cannot and do not promise anyone a position.

IT positions require a variety of skill sets. Where there are matches and/or entry-level positions, every effort will be made to provide these veterans the opportunity for these new career paths.

How old is the VA IT staff? Are there a lot of retirees leaving? Out of the almost 5,000 IT specialists, 10% are eligible for retirement by the end of the calendar year. If you consider those eligible for early exits, that number increases to 35% of the total number of IT specialists. © 2005



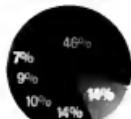
Hiring injured young war veterans for VA jobs seems like a natural. How did this come about? In September 2003, the Office of the Assistant Secretary for Information and Technology (OAIT) established the IT Intern Program, which focused on recruiting and training the next generation to lead VA's future IT program. Recognizing the huge success of

Feeling Better

QUICK HITS

Offshore Realities

Which describes your company's approach to using offshore IT services?



- We're not using them and won't in the next 12 months.
- We have made a commitment to offshore, but are still ramping up our use.
- We use offshore resources whenever and whenever possible.
- We aren't using them but are actively tracking developments.
- We have pilot projects in place, but haven't made a full commitment.
- Don't know

Source: 101 IT decision-makers at North American service firms

Has your company realized the savings it expected from going offshore?



- Too early to tell
- Yes
- Savings, but not as much as expected
- No savings
- Savings that exceeded expectations 9%
- Don't know 5%
- Costs went up 2%

Source: 101 IT decision-makers at North American service firms
ComputerWorld Polls

SOURCE: FORRESTER RESEARCH INC.
CAMPUSFOOTPRINT.COM

PAUL GLEN

The Truth About 'Useless' People

EVERY SO OFTEN, someone will ask me what to do with "nondelivery" people. The question goes something like this: "How do you deal with people who can't execute? They are good at technical analysis, documentation and strategy, but not delivery. I can't afford them."

What the questioner is politely trying to ask is this: "What should I do with useless people?"

It's a question that sometimes rubs me the wrong way, and I'll try to explain why. Once you dig into the query in more detail, you find that it actually can have one of two very distinct meanings.

In the reasonable version, the questioner is asking about a few intelligent and talented employees who are simply unable to finish anything. These are the people who are seemingly paralyzed by ambiguity and are incapable of moving forward until every possible question has been answered.

Helping ambiguity-challenged people is quite hard. When I have encountered them, my impression has been that they have a deep-rooted emotional need for complete information, one that's not easily overcome by repeated pleas for progress, a bad review or even being fired.

The best you can do for them is to gently let them know that perfection isn't required in the first draft of a piece of work and that its purpose is to help figure out both the best questions to ask and the answers to those questions. Relieved of the burden of perfection, they can more easily produce drafts.

In my younger days, I had a tad of

this tendency myself. I once worked for a project manager whom I questioned almost constantly for the first six months we were together. When I quit the job after a year on the project to go back to graduate school, he took me aside at the farewell party.

"I don't understand you at all," the project manager said. "For the first six months you were here, you were such a pain in the @#\$. After that, we rarely spoke, and you became by far the most productive person on the project. What happened?"

"I finally figured out what you wanted," I explained. "We don't see the world the same way, and nothing you asked for made sense to me, so I had to ask a million questions. Once I figured out what you were trying to do, I just got on with it. I didn't necessarily agree with your approach, but that was fine with me, as long as it was a coherent one."

The question's other possible meaning is a bit more irksome to me. In this version, the questioner has a few employees who are quite talented and can finish their work, but they specialize in things that the manager doesn't consider "real work."

These employees are the people

who neither code nor test. They do the things that we learned little about in engineering school. They write requirements documents, design architectures, and produce user and production support documentation. They negotiate with the customers rather than writing code themselves, they build consensus about what should be done.

Here, the questioner needs to rethink his conception of what useful work is. These people do a great deal of the heavy lifting that's truly necessary on a project. If their manager thinks that projects can be completed successfully without building consensus or writing user documentation, he probably needs to expand his definition of project success.

Delivering technology isn't our job. Making our organizations run smoothly and efficiently is. Technology is the means to that end. And if users need documentation to apply our technology, then writing that documentation is "real work" in my book.

Ten years ago, I used to have these conversations all the time about project managers. Clients didn't want to pay for them. Project managers didn't code, so no one knew what they did. Clearly, they weren't real workers.

Luckily, this discussion about project managers is much rarer now. Today, few would think of starting a significant project without one, and the success rate of projects is inching upward in our industry.

Just remember, if we were to go to a conference of chief financial officers (or even of programmers), we might overhear someone asking a similar question: "What should I do about my CIO? I have no idea what he does. He doesn't produce code, and we can't afford him." ☀

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comparing 2002 to 2003

SOURCE: FORRESTER RESEARCH, INC., CAMBRIDGE, MASS., JUNE 2003

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Ten years ago, I used to have these conversations all the time about project managers. Clients didn't want to pay for them. Project managers didn't code, so no one knew what they did. Clearly, they weren't real workers.

Luckily, this discussion about project managers is much rarer now. Today, few would think of starting a significant project without one, and the success rate of projects is inching upward in our industry.

Just remember, if we were to go to a conference of chief financial officers (or even of programmers), we might overhear someone asking a similar question: "What should I do about my CFO? I have no idea what he does. He doesn't produce code, and we can't afford him." ■ **SGG**

WANT OUR OPINION?

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FRANK HAYES • FRANKLY SPEAKING

Pirate Justice

DID YOU LISTEN to the news last Monday, or read the papers the next day? Did you get the impression that the U.S. Supreme Court has declared open season on file-sharing networks that might be used for piracy? You probably did — that's how the story was reported on CNN, in USA Today and by the major news services.

They got it wrong. Backward, in fact. The Supreme Court said explicitly that file-sharing technology isn't, in itself, illegal. Even if it is used to infringe copyrights. To put the court's point simply: Technology doesn't infringe copyrights. People infringe copyrights.

And in the cases of Grokster and Morpheus, the court said the people who created those particular file-sharing networks were so egregious in advertising their support for illegally trading copyrighted material that they could be sued for contributing to that piracy.

What about the file-sharing technology itself? Not a problem, said the justices. In fact, the court's unanimous opinion starts talking about the benefits and legal uses of point-to-point networks on its very first page.

The problem isn't the technology, the court said. The problem is the mountain of evidence that Grokster and StreamCast Networks (the Morpheus people) obviously intended to support piracy. And for that, those companies will have to face the music.

It's easy to see how news reporters got the story wrong, though. On one side, the music and movie industries were crowing about their great victory over file sharing. On the other side, IT vendors were moaning that now any company with technology that might be used illegally will live in fear of lawsuits. Reporters likely figured that these people knew what they were talking about.

But there was no great victory over file sharing — just over Grokster and StreamCast. And there's no cloud hanging over all new technologies — only over companies that invite, encourage and support stealing copyrighted material.

Music and movie companies should crow while they can. From now on, if they'll have to prove that a file-sharing network's operators clearly intended the network to be used illegally. That could be tough with targets like Kazaa, which

explicitly forbids swapping copyrighted material in its click-through license agreement.

And tech companies should be moaning. They should be glad the Supreme Court understands the importance of new technologies.

Look, these justices are setting a standard for the entire U.S. court system. And that standard is very tech-friendly — and tech-savvy. Three of the justices went out of their way to say that CD burners, digital video recorders, MP3 players, Internet search engines and peer-to-peer software are all legal (and to mention that cable descramblers aren't).

In 1984, the Supreme Court ruled that Sony couldn't be held liable just because the VCRs it sold could be misused. In fact, an estimated 90% of VCR use was for illegal copying. But Sony hadn't promoted the machines for that. So the court gave Sony the benefit of the doubt.

Twenty-one years later, the court still gives new technologies — and the companies that sell them — that benefit. Why? The justices understand that technologies grow, change and mature. Early on they may be used for piracy, but new, legitimate uses will never be discovered if they're never given a fair chance.

This court understands the need to protect copyrights. But it's willing to protect and nurture new technologies, even if they're used for piracy. Just not if they're used to promote piracy.

So when you hear someone lamenting the Grokster decision, pass along the good news: The Supreme Court hasn't declared open season on file-sharing networks or any other technology. Just pirates. © 55997



FRANK HAYES, COMPUTERWORLD'S senior news editor, has covered IT for more than 20 years. Contact him at frank.hayes@computerworld.com.

This Fascinating Business of IT

It's Saturday night, and this pilot fish works his the wee hours helping to verify some device information in the data center. "My boss would need off a lot of device numbers, and I'd check them against another display," Bob says. "My boss kept reading and, hearing nothing from me, assumed everything was checking out. Only when he got to the end did he notice I had nodded off."

Got Change?

User calls help desk pilot fish to complain that when he prints a document, the text covers the logo on the company stationary. How far down the page does the logo go? Fish asks.

"None, I guess," Bob knows that's not right, so he tells user to hold a \$1 bill against the page to determine how far down the bill the company logo extends.

User replies for wallet and then replies, "I can't do this." "Why not?" Bob asks. "All I have is \$1."



book that you've made the payment, but it doesn't always show in our records. We recommend that if you choose to pay online, you should call us to tell us you did that."

Wrong Homer

Wrong Homer user has a tradition of naming its servers for Greek philosophers and writers, except a pilot fish working there: "Aristotle, Plato, Socrates, Democritus and Homer. But somebody unknown on the network was allowed to name the most recently acquired servers as Herodotus, Mark, Uta, Meesa and Shaggy."

What's It For?

Part of this ATM network goes down one night because a component failed, and then pilot fish is amazed to learn that the manager won't swap in the spare to restore service. "They decided to hold it until next morning, when a service call by the vendor would be arranged after normal business," Bob continues. "When asked why she didn't substitute the spare in for now, she said she didn't want to be left without a spare."

SHARK LEADS SHARKY BUSINESS Two tales of IT life. Sure, there's the Grokster decision. You'll get a right shark shot if it's any day. And check out the daily load, because the Sharks and signs up for their Shark Tank home delivery at computerworld.com/sharktank.

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Just pirates. © 2005



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7:45am to 8:15am Registration and Networking Breakfast

8:15am to 8:25am **Introduction and Overview**
Julie King, Executive Editor, Events, and National Correspondent, Computerworld

8:25am to 8:55am **Trends in Enterprise Analytics:
An Industry Analyst's Overview**
Keith Gile, Principal Analyst, Forrester Research

8:55am to 9:25am **Case Study: United States Census Bureau**
Blaire Sanders, Branch Chief of System Design and Support, Foreign Trade Division, United States Census Bureau

9:25am to 10:15am **How Technology is Transforming
Business Intelligence**
Rob Stephens, Director, Technology Strategy, SAS
Michael Tiltema, Business Intelligence Strategist, Intel

10:15am to 10:45am Refreshment and Networking Break

10:45am to 11:15am **Case Study: The Nature Conservancy**
Connor Baker, Director of Business Information, The Nature Conservancy

11:15am to Noon **Panel Discussion - From Gut Feel to Fact-Based
Decisions: Real-Life Business, Political and
Technology Lessons Learned on the Front Lines
of Enterprise Analytics**

Moderator: Julie King, Executive Editor, Events, and National Correspondent, Computerworld

Panelists:
-Blaire Sanders, Branch Chief of System Design and Support, Foreign Trade Division, United States Census Bureau
-Connor Baker, Director of Business Information, The Nature Conservancy
-Keith Gile, Principal Analyst, Forrester Research
-Rob Stephens, Director, Technology Strategy, SAS
-Michael Tiltema, Business Intelligence Strategist, Intel

Program Concludes

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Selected
speakers include:



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Director of Business Information,
The Nature Conservancy



Blaire Sanders
Branch Chief of System Design and Support, Foreign Trade Division, United States Census Bureau



Keith Gile
Principal Analyst,
Forrester Research



Rob Stephens
Director, Technology Strategy,
SAS



Michael Tiltema
Business Intelligence Strategist,
Intel



Julie King
Executive Editor, Events, and
National Correspondent,
Computerworld

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